



United States
Department of
Agriculture

In cooperation with
Illinois Agricultural
Experiment Station



Natural
Resources
Conservation
Service

Soil Survey of Alexander County, Illinois

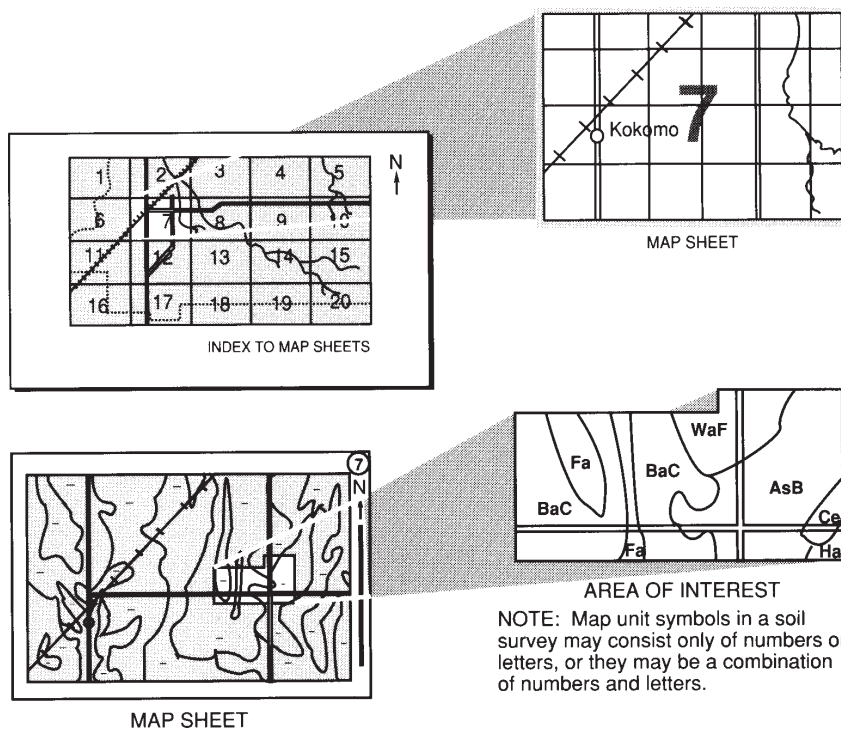
How To Use This Soil Survey

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and go to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Go to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 2000. Soil names and descriptions were approved in 2002. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. This survey was made cooperatively by the Natural Resources Conservation Service and the Illinois Agricultural Experiment Station. The survey is part of the technical assistance furnished to the Alexander County Soil and Water Conservation District. Financial assistance was provided by the Alexander County Board, the Illinois Department of Agriculture, and the United States Department of Agriculture, Forest Service. Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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Foreword

This soil survey contains information that affects land use planning in Alexander County. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations that affect various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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Soil Survey of Alexander County, Illinois

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
Illinois Agricultural Experiment Station

ALEXANDER COUNTY is at the southern tip of Illinois, at the confluence of the Mississippi and Ohio Rivers (fig. 1). The Ohio River flows along the southeastern boundary of Alexander County, and the Mississippi River flows along the western and southern boundaries of the county. Cairo, the county seat, is the largest city in the county.

Farming, in combination with forestry, contributes a major part of the total income to the county. Corn, soybeans, wheat, hogs, and beef cattle are the leading farm products. The Horseshoe Lake Conservation Area in Alexander County provides outdoor recreation.

Alexander County has an area of 248 square miles. A significant part of the acreage consists of bottom land and low terraces along the Cache, Ohio, and Mississippi

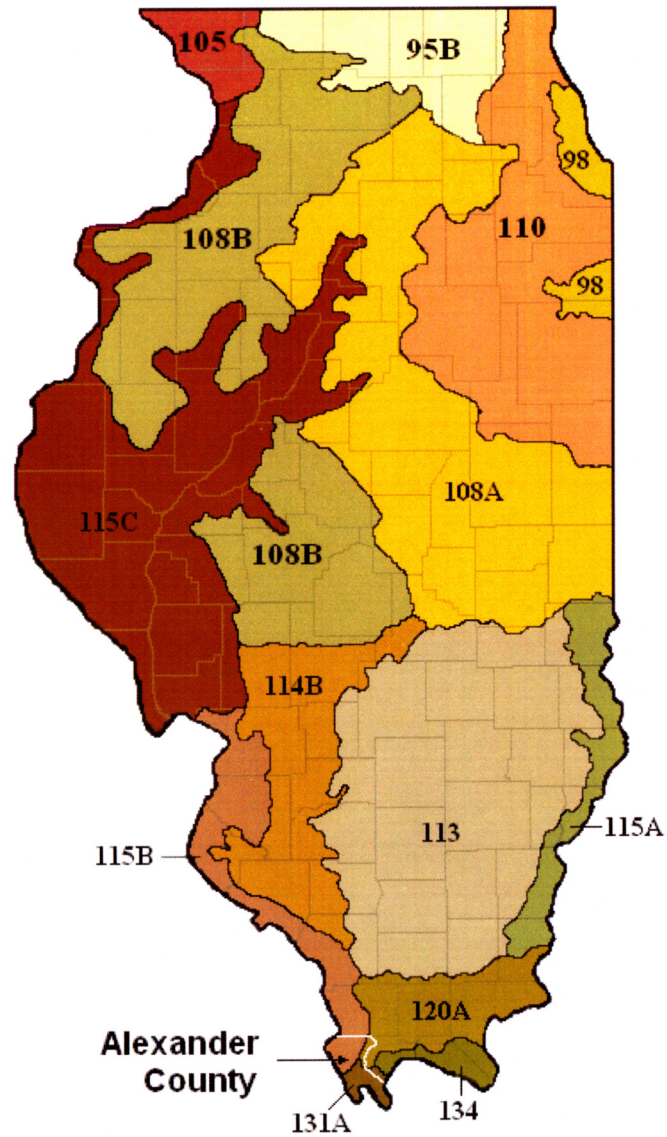


Figure 1.—Location of Alexander County and major land resource areas (MLRAs) in Illinois.

Rivers. These areas are used mainly for the production of corn, soybeans, and wheat. The distinctly steep and rocky uplands of the county are used principally for woodland.

Major Land Resource Areas (MLRAs) are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (19). Alexander County is a subset of the following major land resource areas: 115B—Central Mississippi Valley Wooded Slopes, Western Part; 120A—Kentucky and Indiana Sandstone and Shale Hills and Valleys, Southern Part; and 131A—Southern Mississippi River Alluvium. See figures 1 and 2. Map unit design is based on each soil's occurrence throughout the MLRA. In some cases a soil component may be referred to that does not occur in the Alexander County subset but that has been mapped within the MLRA.

This soil survey updates the 1968 soil survey of Alexander County (15). It contains more current information and provides digitized maps.

LEGEND

95B	Southern Wisconsin and Northern Illinois Drift Plain
98	Southern Michigan and Northern Indiana Drift Plain
105	Northern Mississippi Valley Loess Hills
108A and 108B	Illinois and Iowa Deep Loess and Drift
110	Northern Illinois and Indiana Heavy Till Plain
113	Central Claypan Areas
114B	Southern Illinois and Indiana Thin Loess and Till Plain, Western Part
115A, B, and C	Central Mississippi Valley Wooded Slopes
120A	Kentucky and Indiana Sandstone and Shale Hills and Valleys, Southern Part
131A	Southern Mississippi River Alluvium
134	Southern Mississippi Valley Loess

Figure 2.—Symbols and names of Major Land Resource Areas in Alexander County, Illinois.

General Nature of the County

This section gives general information about Alexander County. It discusses the history; physiography, relief, drainage, and geology; and climate.

History

Alexander County has the distinction of being the first county in Illinois to be organized after the new State of Illinois was formed on December 3, 1818. Governor Shadrach Bond approved and signed the act of the Legislature in Kaskaskia on March 4, 1819, which established the county. Most of the early settlers came from the southern states. In 2000, according to the U.S. Census, the county had a total population of 9,590. The population density is approximately 40.6 people per square mile (22). Approximately 78,000 acres are in farmland and 54,000 acres are in timberland.

Physiography, Relief, Drainage, and Geology

Alexander County is located at the southern tip of Illinois, at the junction of the Ohio and the Mississippi Rivers. This area has a variety of landforms and relief. The elevation in the county ranges from 290 feet at the confluence of the Ohio and Mississippi Rivers to 820 feet in the northern part of the county near the Union County line (fig. 3).

A large part of the county consists of alluvial plains and terraces bordering the Mississippi, Ohio, and Cache Rivers.

The uplands of adjacent Pulaski County and the southern tip of the uplands of Alexander County form an area of gently rolling hills and knobs that are covered with a moderately thick or thick mantle of loess. The elevation ranges from about 340 to 450 feet. This area is underlain by unconsolidated sand, gravel, and clay of the Coastal Plain province (7), the northernmost extension of the Gulf of Mexico embayment during Cretaceous and Tertiary times.

The uplands in the northwestern part of Alexander County constitute the most rugged area in the county. This area has relatively narrow ridgetops and steep-sided,

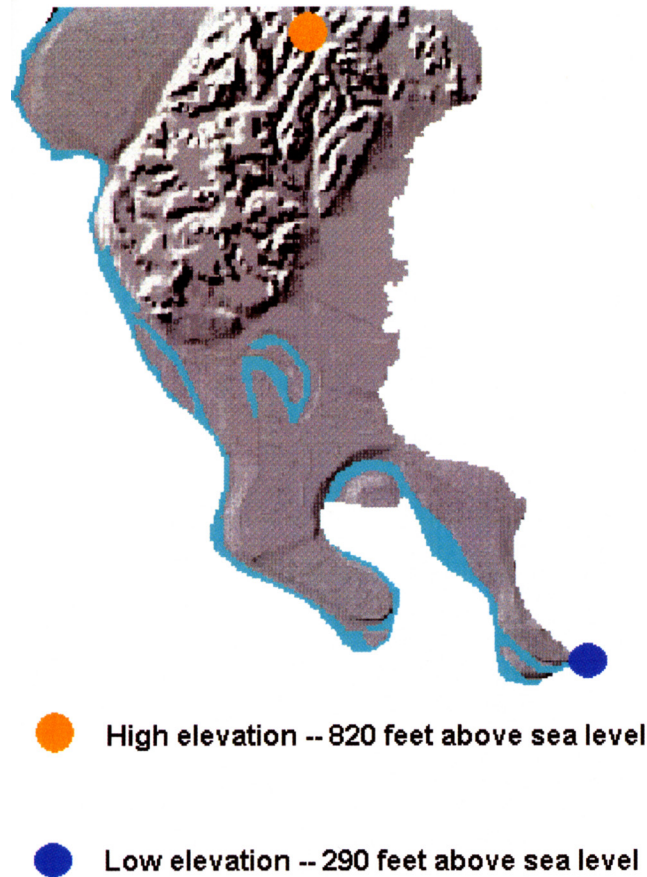


Figure 3.—A generalized relief map of Alexander County showing the highest point (orange dot) and lowest point (blue dot) in the county.

rocky valley walls. The ridgetops commonly are at an elevation of more than 700 feet, and local relief ranges from 150 to 300 feet.

The northeastern part of Alexander County is in the Shawnee section of the Interior Low Plateau province. This area is underlain largely by limestone. A thick mantle of loess covers the ridgetops, and generally a much thinner mantle covers the steep side slopes. In places there are rock outcrops.

The remaining and larger part of the uplands of Alexander County is in the Salem Plateau section of the Ozark Plateau province. This area consists of relatively pure chert beds and some local areas of cherty limestone, overlain by thick deposits of loess. In many places erosion has exposed the underlying rock.

Several important changes in the course of the Mississippi and Ohio Rivers in this region date back to the Pleistocene or glacial era (23). Geological evidence indicates that the silting of the original Mississippi valley by sediment-laden glacial meltwater caused the river to cut the Thebes-Commerce Gorge and to enter the large Ohio valley northwest and west of Cairo.

During at least a part of the glacial age, the Ohio River flowed more or less from east to west from Golconda, Illinois, to the northern part of Pulaski County and then southwestward through the valley now occupied by the Cache River. The present-day Ohio River valley along the southern part of Pulaski County was originally the Tennessee River valley until the silting of the older Ohio valley caused the Ohio River to cut through and divide east of Paducah, Kentucky, and to take over the lower Tennessee valley. During the glacial age, the older Ohio valley was an important

source of loess. At present, the loess in this area is thicker than along the present-day Ohio valley in the southern part of Illinois.

The northeastern part of Alexander County drains into the Ohio River, principally through the Cache River. The western part and most of the southern part of Alexander County drain directly into the Mississippi River.

Ground-water supplies in Alexander County vary from good or excellent on bottom lands and terraces, where aquifers of sand and gravel occur at various depths, to poor on the uplands in the northwestern part of Alexander County, where consolidated chert and limestone bedrock occur (11).

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Anna, Illinois, in the period 1971 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

In winter, the average temperature is 35.6 degrees F and the average daily minimum temperature is 26.5 degrees. The lowest temperature on record, which occurred at Anna on January 12, 1918, was -20 degrees. In summer, the average temperature is 76.4 degrees and the average daily maximum temperature is 87.3 degrees. The highest temperature, which occurred at Anna on July 22, 1901, was 112 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 48.17 inches. Of this, 30.73 inches, or about 64 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 6.7 inches, recorded at Anna on January 22, 1999. Thunderstorms occur on about 60 days each year, and most occur between May and August.

The average seasonal snowfall is 14.2 inches. The total snowfall during a winter was 45.3 inches, recorded for the winter of 1978 and 1979. On an average, 15 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 20 inches, recorded on February 25, 1979.

The average relative humidity in mid-afternoon is about 58 percent. Humidity is higher at night, and the average at dawn is about 86 percent. The sun shines 68 percent of the time possible in summer and 47 percent in winter. The prevailing wind is from the southwest. Average windspeed is highest, around 9 miles per hour, from November to April.

How This Soil Survey Was Made

This soil survey includes a description of the soils and miscellaneous areas and their location and a discussion of their properties and the subsequent effects on suitability, limitations, and management for specified uses. During the 1968 soil survey and as part of this update, soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of soil parent materials. Soil scientists also studied and described soil profiles with the aid of a soil probe or spade. A soil profile is a sequence of natural layers, or horizons, and extends from the soil surface to the unconsolidated material at a depth of about 6 feet. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity. Soil scientists

described new soil profile descriptions and studied profile descriptions from previous fieldwork.

The soils and miscellaneous areas in the county occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the county. Each kind of soil and miscellaneous area is associated with a particular kind or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or soil-landscape model, of how the soils were formed and the geographic distribution of the soils. Thus, during mapping, this model enables the soil scientists to predict with considerable accuracy the kind of soil or soils at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they observed. The maximum depth of observation was about 80 inches (6.7 feet). Soil scientists noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, soil reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify and interpret soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the survey area generally are collected for laboratory analyses and for engineering tests. Field observations and measurements are also made on selected soils. Soil scientists interpret the data from these analyses and tests, as well as the field-observed characteristics and the soil properties, to estimate the expected behavior of the soils under different uses. Information from other soil surveys and soil studies are also used to develop soil interpretations.

Soils vary across the landscape and with time. Predictions about soil behavior are based not only on how soils occur on the landscape but also on such variables as climate, biological activity, and local land use. Some soil conditions are very stable and predictable over long periods of time. Examples are clay content in the subsoil and cation-exchange capacity. Some soil conditions change rapidly over the course of a year but are still predictable. Examples are monthly soil moisture status within certain depths of the soil profile and monthly depth and duration of ponding in a detailed soil map unit.

Interpretations for some of the soils are field tested through observation of the soils in different uses and under different levels of management. National and regional soil interpretations are modified as necessary to fit local conditions, and some new interpretations are developed to meet local needs. Map unit descriptions, interpretations, and tables for this soil survey were generated using the National Soil Survey Information System (NASIS), version 5.0.

Aerial photographs were taken in 1993. Soil scientists also used U.S. Geological

Soil Survey of Alexander County, Illinois

Survey topographic maps enlarged to a scale of 1:12,000 and orthophotographs to relate land and image features. Selected areas of the county were reinvestigated to update and refine local soil-landscape models. Soil boundaries from the 1968 published soil maps were drawn on the orthophotographs. Adjustments of soil boundary lines were made to coincide with the U.S. Geological Survey topographic map contour lines, Digital Elevation Models (DEMs), and tonal patterns on aerial photographs.

The descriptions, names, and delineations of the soils in this survey area may not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

Detailed Soil Map Units

The map units on the detailed maps represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the headings “Use and Management of the Soils” and “Soil Properties.”

A map unit delineation on a map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to other taxonomic classes.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in the map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown

on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Menfro silt loam, 5 to 10 percent slopes, eroded, is a phase of the Menfro series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are undifferentiated groups or complexes.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Bonnie and Petrolia soils, undrained, 0 to 2 percent slopes, frequently flooded, is an undifferentiated group in this survey area.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Clarksville-Stookey complex, 35 to 70 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, quarries, is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Contents") give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

75C—Drury silt loam, 5 to 10 percent slopes

Setting

Landform on landscape: Loess hill on foothills

Position on landform: Foothlope

Composition

Drury and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Drury soil
- Soils that have more clay in the subsoil horizons than the Drury soil
- Areas that have greater or lesser slopes than the Drury soil

Dissimilar soils:

- Well drained Elsay soils in narrow drainageways
- Well drained Clarksville and Goss soils on uplands
- Somewhat poorly drained Wakeland soils on flood plains

Soil Properties and Qualities

Parent material: Colluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

75C3—Drury silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on foothills
Position on landform: Footslope

Composition

Drury and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Drury soil
- Soils that have more clay in the subsoil horizons than the Drury soil
- Areas with greater or lesser slopes than the Drury soil

Dissimilar soils:

- Well drained Elsay soils in narrow drainageways
- Well drained Clarksville and Goss soils on uplands
- Somewhat poorly drained Wakeland soils on flood plains

Soil Properties and Qualities

Parent material: Colluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.3 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: High
Corrosivity: Moderate for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

75D—Drury silt loam, 10 to 18 percent slopes

Setting

Landform on landscape: Loess hill on foothills

Position on landform: Footslope

Composition

Drury and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Drury soil
- Soils that have more clay in the subsoil horizons than the Drury soil
- Areas with greater or lesser slopes than the Drury soil

Dissimilar soils:

- Well drained Elsay soils in narrow drainageways
- Well drained Clarksville and Goss soils on uplands
- Somewhat poorly drained Wakeland soils on flood plains

Soil Properties and Qualities

Parent material: Colluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

79B—Menfro silt loam, 2 to 5 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Summit and shoulder

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

79C—Menfro silt loam, 5 to 10 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Shoulder and backslope

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

79C2—Menfro silt loam, 5 to 10 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland
Position on landform: Shoulder and backslope

Composition

Menfro and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

79C3—Menfro silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope and shoulder

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Accelerated erosion: Surface layer is mostly subsoil material

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

79D—Menfro silt loam, 10 to 18 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Menfro and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil
- Well drained Wellston soils in the lower backslope positions

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

79D2—Menfro silt loam, 10 to 18 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil
- Well drained Wellston soils in the lower backslope positions

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland: Farmland of statewide importance
Hydric soil: No

79D3—Menfro silt loam, 10 to 18 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope

Composition

Menfro and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils in slope positions similar to those of the Menfro soil
- Well drained Wellston soils in the lower backslope positions

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland: Farmland of statewide importance
Hydric soil: No

79E—Menfro silt loam, 18 to 25 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Clarksville, Goss, and Wellston soils on the lower backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soil: No

79E2—Menfro silt loam, 18 to 25 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Clarksville, Goss, and Wellston soils on the lower backslopes

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland: Not prime farmland
Hydric soil: No

79E3—Menfro silt loam, 18 to 25 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope

Composition

Menfro and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Clarksville, Goss, and Wellston soils on the lower backslopes

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soil: No

79F—Menfro silt loam, 25 to 35 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Menfro and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Menfro soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Clarksville and Goss soils on the lower backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soil: No

164B—Stoy silt loam, 2 to 5 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Summit and shoulder

Composition

Stoy and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Stoy soil

Dissimilar soils:

- Moderately well drained Hosmer soils on shoulders and backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.0 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Perched; 1.0 foot; January to May

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

175A—Lamont fine sandy loam, 0 to 2 percent slopes

Setting

Landform on landscape: Dune in valley

Composition

Lamont and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Somewhat poorly drained Roby soils in the lower areas
- Well drained Alvin and Landes soils in slope positions similar to those of the Lamont soil

Soil Properties and Qualities

Parent material: Eolian deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Very low
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland: All areas are prime farmland
Hydric soil: No

175B—Lamont fine sandy loam, 2 to 5 percent slopes

Setting

Landform on landscape: Dune in valley

Composition

Lamont and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Somewhat poorly drained Roby soils in the lower areas
- Well drained Alvin and Landes soils in slope positions similar to those of the Lamont soil

Soil Properties and Qualities

Parent material: Eolian deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: Moderate
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Very low
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland: All areas are prime farmland
Hydric soil: No

175C—Lamont fine sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform on landscape: Dune in valley

Composition

Lamont and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Somewhat poorly drained Roby soils in the lower areas
- Well drained Alvin and Landes soils in slope positions similar to those of the Lamont soil

Soil Properties and Qualities

Parent material: Eolian deposits

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Potential for frost action: Moderate

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3e

Prime farmland: Farmland of statewide importance

Hydric soil: No

214B—Hosmer silt loam, 2 to 5 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Shoulder and summit

Composition

Hosmer and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Hosmer soil
- Well developed fragipan soils that have a thinner loess cap
- Soils that have a seasonal high water table at a depth of less than 1.5 feet

Dissimilar soils:

- Somewhat poorly drained Stoy soils on summits and shoulder slopes
- Well drained Menfro soils on summits and shoulder slopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow to moderate

Depth to restrictive feature: 20 to 36 inches to a fragipan

Available water capacity: About 8.0 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

214C—Hosmer silt loam, 5 to 10 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope and shoulder

Composition

Hosmer and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Hosmer soil
- Well developed fragipan soils that have a thinner loess cap
- Soils that have a seasonal high water table at a depth of less than 1.5 feet

Dissimilar soils:

- Somewhat poorly drained Stoy soils on summits and shoulder slopes
- Well drained Menfro soils on shoulders and backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow to moderate

Depth to restrictive feature: 20 to 36 inches to a fragipan

Available water capacity: About 8.0 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April
Potential for frost action: High
Corrosivity: Moderate for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

214C2—Hosmer silt loam, 5 to 10 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope and shoulder

Composition

Hosmer and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Hosmer soil
- Well developed fragipan soils that have a thinner loess cap
- Soils that have a seasonal high water table at a depth of less than 1.5 feet

Dissimilar soils:

- Somewhat poorly drained Stoy soils on summits and shoulder slopes
- Well drained Menfro soils on shoulders and backslopes

Soil Properties and Qualities

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow to moderate
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.5 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Moderate for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

214C3—Hosmer silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope and shoulder

Composition

Hosmer and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Hosmer soil
- Well developed fragipan soils that have a thinner loess cap
- Soils that have a seasonal high water table at a depth of less than 1.5 feet

Dissimilar soils:

- Somewhat poorly drained Stoy soils on summits and shoulder slopes
- Well drained Menfro soils on shoulders and backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow to moderate

Depth to restrictive feature: 20 to 36 inches to a fragipan

Available water capacity: About 7.2 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April

Accelerated erosion: Surface layer is mostly subsoil material

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

214D2—Hosmer silt loam, 10 to 18 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Hosmer and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Hosmer soil
- Well developed fragipan soils that have a thinner loess cap
- Soils that have a seasonal high water table at a depth of less than 1.5 feet

Dissimilar soils:

- Somewhat poorly drained Stoy soils on summits and shoulders
- Well drained Menfro soils on shoulders and backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow to moderate

Depth to restrictive feature: 20 to 36 inches to a fragipan

Available water capacity: About 7.5 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April

Accelerated erosion: Surface layer has been thinned by erosion

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

**214D3—Hosmer silt loam, 10 to 18 percent slopes,
severely eroded**

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Hosmer and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Hosmer soil
- Well developed fragipan soils that have a thinner loess cap
- Soils that have a seasonal high water table at a depth of less than 1.5 feet

Dissimilar soils:

- Somewhat poorly drained Stoy soils on summits and shoulder slopes
- Well drained Menfro soils on backslopes

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow to moderate
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.2 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: High
Corrosivity: Moderate for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland: Not prime farmland
Hydric soil: No

216D—Stookey silt loam, 10 to 18 percent slopes

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope

Composition

Stookey and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: Farmland of statewide importance

Hydric soil: No

216D2—Stookey silt loam, 10 to 18 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Stookey and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Accelerated erosion: Surface layer has been thinned by erosion

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: Farmland of statewide importance

Hydric soil: No

216E—Stookey silt loam, 18 to 25 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Stookey and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soil: No

216E2—Stookey silt loam, 18 to 25 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Stookey and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker or thinner than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.6 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland: Not prime farmland
Hydric soil: No

216E3—Stookey silt loam, 18 to 25 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope

Composition

Stookey and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland: Not prime farmland
Hydric soil: No

216F—Stookey silt loam, 25 to 35 percent slopes

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope

Composition

Stookey and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e
Prime farmland: Not prime farmland
Hydric soil: No

216G—Stookey silt loam, 35 to 70 percent slopes

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope

Composition

Stookey and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Stookey soil
- Soils that have more clay in the subsoil than the Stookey soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Soils that have more than 35 percent rock fragments in the subsoil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 7e

Prime farmland: Not prime farmland

Hydric soil: No

471F—Clarksville gravelly silt loam, 25 to 35 percent slopes

Setting

Landform on landscape: Hillslope on upland

Position on landform: Backslope

Composition

Clarksville and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils with clayey residuum in the subsoil
- Soils that have thinner surface horizons than the Clarksville soil
- Soils that have fewer chert fragments in surface horizons than the Clarksville soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Elsayh soils on narrow flood plains
- Moderately well drained Burnside soils on narrow flood plains

Soil Properties and Qualities

Parent material: Colluvium over cherty residuum

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.6 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Corrosivity: Low for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High

Interpretive Groups

Land capability classification: 6e
Prime farmland: Not prime farmland
Hydric soil: No

471G—Clarksville gravelly silt loam, 35 to 70 percent slopes

Setting

Landform on landscape: Hillslope on upland
Position on landform: Backslope

Composition

Clarksville and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have clayey residuum in the subsoil
- Soils that have thinner surface horizons than the Clarksville soil
- Soils that have fewer chert fragments in surface horizons than the Clarksville soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Elsay soils on narrow flood plains
- Moderately well drained Burnside soils on narrow flood plains

Soil Properties and Qualities

Parent material: Colluvium over cherty residuum
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.6 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Corrosivity: Low for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High

Interpretive Groups

Land capability classification: 7e
Prime farmland: Not prime farmland
Hydric soil: No

477B—Winfield silt loam, 2 to 5 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Shoulder and summit

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are in positions similar to those of the Winfield soil

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.9 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

477C—Winfield silt loam, 5 to 10 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope and shoulder

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.9 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: Farmland of statewide importance

Hydric soil: No

477C2—Winfield silt loam, 5 to 10 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope and shoulder

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Moderate for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland: Farmland of statewide importance
Hydric soil: No

477C3—Winfield silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland
Position on landform: Backslope and shoulder

Composition

Winfield and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: High
Corrosivity: Moderate for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland: Farmland of statewide importance
Hydric soil: No

477D2—Winfield silt loam, 10 to 18 percent slopes, eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface layers that are thinner or thicker than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Accelerated erosion: Surface layer has been thinned by erosion

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

477D3—Winfield silt loam, 10 to 18 percent slopes, severely eroded

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Accelerated erosion: Surface layer is mostly subsoil material

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

**477E3—Winfield silt loam, 18 to 25 percent slopes,
severely eroded**

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

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Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Accelerated erosion: Surface layer is mostly subsoil material

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soil: No

477F—Winfield silt loam, 25 to 35 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Winfield and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have surface horizons that are thicker than those of the Winfield soil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Moderately well drained Hosmer soils that have a fragipan and are on summits and shoulders

Soil Properties and Qualities

Parent material: Loess

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.9 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Potential for frost action: High

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soil: No

717F—Stookey-Clarksville complex, 18 to 35 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Backslope

Composition

Stookey and similar soils: 45 percent

Clarksville and similar soils: 40 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have clayey residuum in the subsoil
- Soils that have surface horizons that are thinner than those of the Stookey and Clarksville soils
- Soils that have a seasonal high water table at a depth of less than 3.5 feet
- Soils that have carbonates in the lower part

Dissimilar soils:

- Well drained Elsay soils on narrow flood plains

Properties and Qualities of the Stookey Soil

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Properties and Qualities of the Clarksville Soil

Parent material: Colluvium over cherty residuum

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: Moderate

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soils: No

717G—Clarksville-Stookey complex, 35 to 70 percent slopes

Setting

Landform on landscape: Hillslope on upland

Position on landform: Clarksville—lower backslopes; Stookey—upper backslopes

Composition

Clarksville and similar soils: 45 percent

Stookey and similar soils: 40 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have clayey residuum in the subsoil
- Soils that have thinner surface horizons than the Clarksville and Stookey soils
- Soils that have a seasonal high water table at a depth of less than 3.5 feet
- Soils that have carbonates in the lower part of the profile

Dissimilar soils:

- Well drained Elsay and Haymond soils on flood plains

Properties and Qualities of the Clarksville Soil

Parent material: Colluvium over cherty residuum

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: Moderate

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Properties and Qualities of the Stookey Soil

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 7e
Prime farmland: Not prime farmland
Hydric soils: No

801B—Orthents, silty, undulating

General Description

This map unit is in areas where soil material has been excavated and redeposited during sand and gravel mining operations, road construction, dam building, or other activities requiring mass disturbance of earthy material. Typically, the surface layer is silt loam or silty clay loam. The underlying material is silty clay loam, silt loam, loam, or clay loam.

Setting

Landform on landscape: Cut (road, railroad, etc.), fill, borrow pit, and/or reclaimed land on uplands, terraces, lake plains, or flood plains

Composition

Orthents and similar soils: 100 percent

Soil Properties and Qualities

Parent material: Earthy fill
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Organic matter content in surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland: Not prime farmland
Hydric soils: No

802D—Orthents, loamy, hilly

General Description

This map unit consists of areas where soil material has been excavated from borrow areas and redeposited as a result of mining operations, road and levee construction, building of dams, or other activities requiring mass disturbance of earthy material. Slopes generally range from 0 to 20 percent. Typically, the surface layer is silt

loam or loam. The underlying material is silt loam, loam, clay loam, or fine sandy loam. The soil properties and qualities listed below are average values. The values may be significantly different at any given site.

Setting

Landform on landscape: Constructed levee, cut (road, railroad, etc.), fill, and/or borrow pit

Composition

Orthents and similar soils: 100 percent

Similar soils:

- Soils that have a seasonal high water table within a depth of 6 feet

Soil Properties and Qualities

Parent material: Earthy fill

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 10.9 inches to a depth of 60 inches

Organic matter content in surface layer: 0.1 to 1.0 percent

Shrink-swell potential: Moderate

Potential for frost action: Moderate

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: Not prime farmland

Hydric soils: No

832F—Menfro-Clarksville complex, 18 to 35 percent slopes

Setting

Landform on landscape: Loess hill on upland

Position on landform: Menfro—upper backslope; Clarksville—lower backslope

Composition

Menfro and similar soils: 45 percent

Clarksville and similar soils: 40 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have clayey residuum in the subsoil
- Soils that have surface horizons that are thinner than those of the Menfro and Clarksville soils
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Elsayh soils on narrow flood plains

Properties and Qualities of the Menfro Soil

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Properties and Qualities of the Clarksville Soil

Parent material: Colluvium over cherty residuum

Drainage class: Somewhat excessively drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 5.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: Moderate

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soils: No

832G—Clarksville-Menfro complex, 35 to 70 percent slopes

Setting

Landform on landscape: Hillslope on upland

Position on landform: Clarksville—lower backslopes; Menfro—upper backslopes

Composition

Clarksville and similar soils: 45 percent

Menfro and similar soils: 40 percent

Dissimilar soils: 15 percent

Similar soils:

- Soils that have clayey residuum in the subsoil
- Soils that have thinner surface horizons than the Clarksville and Menfro soils
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Elsah and Haymond soils on flood plains

Properties and Qualities of the Clarksville Soil

Parent material: Colluvium over cherty residuum
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.6 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Potential for frost action: Moderate
Corrosivity: Low for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 7e
Prime farmland: Not prime farmland
Hydric soils: No

833F—Menfro-Goss complex, 18 to 35 percent slopes

Setting

Landform on landscape: Loess hill on upland
Position on landform: Menfro—upper backslope; Goss—lower backslope

Composition

Menfro and similar soils: 60 percent
Goss and similar soils: 30 percent
Dissimilar soils: 10 percent

Similar soils:

- Soils that do not have a clayey residuum in the subsoil
- Soils that have surface horizons that are thinner than those of the Menfro and Goss soils
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Elsay soils on narrow flood plains

Properties and Qualities of the Menfro Soil

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Properties and Qualities of the Goss Soil

Parent material: Colluvium over cherty residuum weathered from limestone and dolomite

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.4 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: Moderate

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Interpretive Groups

Land capability classification: 6e

Prime farmland: Not prime farmland

Hydric soils: No

833G—Goss-Menfro complex, 35 to 70 percent slopes

Setting

Landform on landscape: Hillslope on upland

Position on landform: Goss—lower backslope; Menfro—upper backslope

Composition

Goss and similar soils: 60 percent

Menfro and similar soils: 30 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner than those of the Goss and Menfro soils
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Elsah soils on narrow flood plains

Properties and Qualities of the Goss Soil

Parent material: Colluvium over cherty residuum weathered from limestone and dolomite

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.4 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: Moderate

Corrosivity: Moderate for steel and moderate for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Properties and Qualities of the Menfro Soil

Parent material: Loess

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.8 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Moderate

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 7e

Prime farmland: Not prime farmland

Hydric soils: No

864—Pits, quarries

This map unit consists of open excavations from which limestone has been removed or is being removed.

This map unit is not assigned any interpretive groups.

865—Pits, gravel

This map unit consists of nearly level to gently sloping areas from which gravel has been extracted. The pits have nearly vertical sidewalls. Some pits are active, and others have been abandoned. Some contain water.

This map unit is not assigned any interpretive groups.

1426A—Karnak silty clay, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Karnak and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Overflow channels where silty overwash is evident
- Areas that are not ponded

Dissimilar soils:

- Soils that are more acid than the Karnak soil
- Soils on slight rises that are coarser textured and better drained than the Karnak soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.0 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 1 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

1843A—Bonnie and Petrolia soils, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Bonnie and similar soils: 40 percent

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Petrolia and similar soils: 40 percent

Dissimilar soils: 20 percent

Similar soils:

- Areas that are not ponded

Dissimilar soils:

- Somewhat poorly drained Belknap soils in the slightly higher positions of the flood plain

Properties and Qualities of the Bonnie Soil

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 1 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Properties and Qualities of the Petrolia Soil

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 1 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soils: Yes

1845A—Darwin and Jacob silty clays, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Darwin and similar soils: 45 percent

Jacob and similar soils: 45 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are not ponded

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight ridges

Soil Properties and Qualities of the Darwin Soil

Parent material: Alluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.8 inches to a depth of 60 inches

Organic matter content in surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Very high

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 1 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: Moderate

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Soil Properties and Qualities of the Jacob Soil

Parent material: Alluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.2 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Very high

Seasonal high water table (kind, depth, months): Perched; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 1 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: Moderate

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soils: Yes

1846A—Karnak and Cape silty clays, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Karnak and similar soils: 55 percent

Cape and similar soils: 35 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Areas with short steep slopes
- Overflow channels where silty overwash is evident
- Areas that are not ponded

Dissimilar soils:

- Soils on slight rises that are coarser textured and better drained than the Karnak and Cape soils

Properties and Qualities of the Karnak Soil

Parent material: Alluvium

Drainage class: Very poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.0 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 1 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Properties and Qualities of the Cape Soil

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 1 foot
Flooding (frequency, months): Frequent; January to June
Potential for frost action: High
Corrosivity: High for steel and high for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soils: Yes

3070L—Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Beaucoup and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Soils that have a seasonal high water table at a depths of more than 3.5 feet

Dissimilar soils:

- Well drained Armiesburg soils in the higher-lying areas
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.2 inches to a depth of 60 inches
Organic matter content in surface layer: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot
Flooding (frequency, months): Frequent; January to June
Potential for frost action: High

Corrosivity: High for steel and low for concrete
Potential for surface runoff: Negligible
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3071A—Darwin silty clay, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Darwin and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight ridges

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.8 inches to a depth of 60 inches
Organic matter content in surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Very high
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot
Flooding (frequency, months): Frequent; January to June
Potential for frost action: Moderate
Corrosivity: High for steel and low for concrete
Potential for surface runoff: Very low
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 4w
Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil: Yes

3071L—Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Darwin and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight ridges

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.8 inches to a depth of 60 inches

Organic matter content in surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Very high

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: Moderate

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3092BL—Sarpy fine sand, 1 to 8 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Sarpy and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas where slopes are short and steep

Soil Survey of Alexander County, Illinois

- Areas that are occasionally flooded
- Recently flooded and scoured areas with sandy deposits

Dissimilar soils:

- Well drained Ware soils in slope positions similar to those of the Sarpy soil
- Moderately well drained Medway soils in slope positions similar to those of the Sarpy soil

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Rapid

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.2 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Frequent; January to May

Potential for frost action: Low

Corrosivity: Low for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: High

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3108A—Bonnie silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Bonnie and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded

Dissimilar soils:

- Somewhat poorly drained Belknap soils in the slightly higher positions of the flood plain
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil: Yes

3162L—Gorham silty clay loam, 0 to 3 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Gorham and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas where the surface layer is loamy
- Areas that are occasionally flooded

Dissimilar soils:

- Moderately well drained Medway soils on slight rises
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches

Organic matter content in surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3180L—Dupo silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Dupo and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that are flooded for shorter durations

Dissimilar soils:

- Somewhat poorly drained Wakeland soils in the slightly higher areas
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Silty alluvium over clayey alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural change
Available water capacity: About 10.3 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Perched; 0.5 foot; January to May
Flooding (frequency, months): Frequent; January to June
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Potential for surface runoff: High
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3284L—Tice silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Tice and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Areas that have loamy overwash

Dissimilar soils:

- Moderately well drained Medway soils on slight rises
- Recently flooded and scoured areas with sandy deposits
- Poorly drained Darwin soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.6 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3288L—Petrolia silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Petrolia and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that have silty overwash
- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Soils that are not ponded and are better drained than the Petrolia soil
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3331A—Haymond silt loam, 0 to 3 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Haymond and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Somewhat poorly drained Wakeland soils in slightly depressional areas

Dissimilar soils:

- Well drained or somewhat excessively drained Elsah soils adjacent to stream channels
- Moderately well drained Burnside soils on narrow flood plains
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 13.2 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Frequent; January to May
Potential for frost action: High
Corrosivity: Low for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland: Prime farmland if protected from flooding or not frequently flooded during the growing season
Hydric soil: No

3331L—Haymond silt loam, 0 to 3 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Haymond and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Somewhat poorly drained Wakeland soils in slightly depressional areas

Dissimilar soils:

- Well drained or somewhat excessively drained Elsay soils adjacent to stream channels
- Moderately well drained Burnside soils on narrow flood plains
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Frequent; January to June
Potential for frost action: High
Corrosivity: Low for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3333A—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Wakeland and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded

Dissimilar soils:

- Well drained Haymond soil on slight rises
- Recently flooded and scoured areas that have sandy deposits
- Poorly drained Birds soils in slight depressions

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil: No

3333L—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Wakeland and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Well drained Haymond soil on slight rises
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3334A—Birds silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Birds and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded

Dissimilar soils:

- Somewhat poorly drained Wakeland soils in the slightly higher portions of the flood plain
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil: Yes

3334L—Birds silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Birds and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Somewhat poorly drained Wakeland soils in the slightly higher portions of the flood plain
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Negligible

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3382A—Belknap silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Belknap and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet
- Soils that are moderately acid to slightly alkaline

Dissimilar soils:

- Moderately well drained Sharon soils in the slightly higher areas of the flood plain
- Poorly drained Bonnie soils on toeslopes
- Poorly drained Piopolis soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil: No

3420A—Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Piopolis and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that have silty overwash

Dissimilar soils:

- Soils that are not ponded and are better drained than the Piopolis soil
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil: Yes

3422A—Cape silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Cape and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Areas with short steep slopes

Dissimilar soils:

- Soils on slight rises that are coarser textured and better drained than the Cape soil
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.3 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Frequent; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Hydric soil: Yes

3422A+—Cape silt loam, overwash, 0 to 2 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Cape and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Areas with thin or no overwash
- Areas with short steep slopes

Dissimilar soils:

- Soils on slight rises that are coarser textured and better drained than the Cape soil
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Seasonal high water table (depth, months): At the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot
Flooding (frequency, months): Frequent; January to June
Potential for frost action: High
Corrosivity: High for steel and high for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil: Yes

3426L—Karnak silty clay, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Karnak and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Overflow channels where silty overwash is evident
- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Soils that are more acid than the Karnak soil
- Soils on slight rises that are coarser textured and better drained than the Karnak soil
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.0 inches to a depth of 60 inches
Organic matter content in surface layer: 2.0 to 3.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot
Flooding (frequency, months): Frequent; January to June

Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3449L—Armiesburg-Sarpy complex, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Armiesburg and similar soils: 45 percent
Sarpy and similar soils: 35 percent
Dissimilar soils: 20 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Ware soils in slope positions similar to those of the Armiesburg and Sarpy soils
- Moderately well drained Medway soils in slope positions similar to those of the Armiesburg and Sarpy soils

Properties and Qualities of the Armiesburg Soil

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Organic matter content in surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding (frequency, months): Frequent; January to May
Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Frequent; January to May
Potential for frost action: Low
Corrosivity: Low for steel and low for concrete
Potential for surface runoff: Negligible
Water erosion susceptibility: Low
Wind erosion susceptibility: High

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soils: Yes

3452L—Riley silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Riley and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Areas that are wet or ponded for long duration
- Areas with overwash of fine sandy loam

Dissimilar soils:

- Recently flooded and scoured areas with sandy deposits
- Poorly drained Gorham soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.5 inches to a depth of 60 inches
Organic matter content in surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May
Flooding (frequency, months): Frequent; January to June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Potential for surface runoff: High
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3456B—Ware loam, 1 to 6 percent slopes, frequently flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Ware and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that are sandy
- Areas where slopes are short and steep

Dissimilar soils:

- Moderately well drained Medway soils on low ridges and natural levees along sloughs or overflow channels of flood plains
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Frequent; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3s

Prime farmland: Prime farmland if protected from flooding or not frequently flooded during the growing season

Hydric soil: No

3456BL—Ware loam, 1 to 6 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Ware and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Areas that are sandy
- Areas where slopes are short and steep

Dissimilar soils:

- Moderately well drained Medway soils on low ridges and natural levees along sloughs or overflow channels of flood plains
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Frequent; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 5w

Prime farmland: Not prime farmland

Hydric soil: Yes

3590L—Cairo silty clay, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Cairo and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that are moderately acid or strongly acid in the subsoil
- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight rises
- Recently flooded and scoured areas with sandy deposits

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 20 to 39 inches to strongly contrasting textural stratification
Available water capacity: About 7.6 inches to a depth of 60 inches
Organic matter content in surface layer: 5.0 to 7.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot
Flooding (frequency, months): Frequent; January to June
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Potential for surface runoff: Negligible
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3597L—Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Armiesburg and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Ware soils in slope positions similar to those of the Armiesburg soil
- Moderately well drained Medway soils in slope positions similar to those of the Armiesburg soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Organic matter content in surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding (frequency, months): Frequent; January to May

Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

3682BL—Medway silty clay loam, 1 to 6 percent slopes, frequently flooded, long duration

Setting

Landform on landscape: Flood plain in valley

Composition

Medway and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations
- Areas along overflow channels where loamy overwash is present
- Areas where slopes are short and steep

Dissimilar soils:

- Well drained Ware soils on slight rises
- Somewhat poorly drained Bowdre soils in similar or lower-lying positions
- Recently flooded and scoured areas with sandy deposits
- Poorly drained Gorham soils in the lower-lying positions

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.8 inches to a depth of 60 inches
Organic matter content in surface layer: 3.0 to 6.0 percent
Shrink-swell potential: Low
Seasonal high water table (kind, depth, months): Apparent; 1.5 feet; January to April
Flooding (frequency, months): Frequent; January to May
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 5w
Prime farmland: Not prime farmland
Hydric soil: Yes

7084A—Okaw silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Composition

Okaw and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:

- Somewhat poorly drained Roby soils in the slightly higher positions

Soil Properties and Qualities

Parent material: Lacustrine deposits

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 20 inches to abrupt textural change

Available water capacity: About 9.4 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Rare; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Farmland of statewide importance

Hydric soil: Yes

7122B—Colp silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace on lake plain

Position on landform: Shoulder and summit

Composition

Colp and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have thinner surface horizons

Dissimilar soils:

- Somewhat poorly drained Hurst soils in the less sloping areas

Soil Properties and Qualities

Parent material: Lacustrine deposits

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.4 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Flooding (frequency, months): Rare; January to April

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: All areas are prime farmland

Hydric soil: No

**7122C2—Colp silt loam, 5 to 10 percent slopes, eroded,
rarely flooded**

Setting

Landform on landscape: Terrace on lake plain

Position on landform: Backslope

Composition

Colp and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thinner or thicker than those of the Colp soil

Dissimilar soils:

- Somewhat poorly drained Hurst soils in the less sloping areas

Soil Properties and Qualities

Parent material: Thin loess over clayey lacustrine deposits

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.1 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; 2.0 feet; January to April

Flooding (frequency, months): Rare; January to April

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

7131A—Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit

Composition

Alvin and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Lamont and Wheeling soils in slope positions similar to those of the Alvin soil
- Somewhat poorly drained Roby soils in the less sloping areas

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Rare; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 2s

Prime farmland: All areas are prime farmland

Hydric soil: No

7131B—Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit and shoulder

Composition

Alvin and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Alvin soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Lamont and Wheeling soils in slope positions similar to those of the Alvin soil
- Somewhat poorly drained Roby soils in the less sloping areas

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Rare; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

7131C—Alvin fine sandy loam, 5 to 10 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit and shoulder

Composition

Alvin and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Alvin soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Lamont and Wheeling soils in slope positions similar to those of the Alvin soil
- Somewhat poorly drained Roby soils in the less sloping areas

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderately rapid

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.6 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Rare; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3e

Prime farmland: All areas are prime farmland

Hydric soil: No

**7131C2—Alvin fine sandy loam, 5 to 10 percent slopes,
eroded, rarely flooded**

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit and shoulder

Composition

Alvin and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Alvin soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Lamont and Wheeling soils in slope positions similar to those of the Alvin soil
- Somewhat poorly drained Roby soils in the less sloping areas

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.4 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Rare; January to May
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: Moderate
Corrosivity: Low for steel and high for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland: All areas are prime farmland
Hydric soil: No

7131D2—Alvin fine sandy loam, 10 to 18 percent slopes, eroded, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Backslope

Composition

Alvin and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Alvin soil
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Lamont and Wheeling soils in the less sloping positions
- Somewhat poorly drained Roby soils in the less sloping areas

Soil Properties and Qualities

Parent material: Sandy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.4 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Rare; January to May
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: Moderate
Corrosivity: Low for steel and high for concrete

Potential for surface runoff: Low
Water erosion susceptibility: High
Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 4e
Prime farmland: Farmland of statewide importance
Hydric soil: No

7338A—Hurst silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Summit

Composition

Hurst and similar soils: 95 percent
Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have calcareous subsoils
- Soils that have stratified coarser subsoil material

Dissimilar soils:

- Moderately well drained Colp soils in the more sloping areas
- Poorly drained Okaw soils on footslopes

Soil Properties and Qualities

Parent material: Lacustrine deposits
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.3 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May
Flooding (frequency, months): Rare; January to May
Potential for frost action: Moderate
Corrosivity: High for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland: Farmland of statewide importance
Hydric soil: No

7338B—Hurst silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit and shoulder

Composition

Hurst and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have calcareous subsoils
- Soils that have stratified coarser subsoil material

Dissimilar soils:

- Moderately well drained Colp soils in the more sloping areas

Soil Properties and Qualities

Parent material: Lacustrine deposits

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.3 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May

Flooding (frequency, months): Rare; January to May

Potential for frost action: Moderate

Corrosivity: High for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Farmland of statewide importance

Hydric soil: No

7401A—Okaw silty clay loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit

Composition

Okaw and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:

- Somewhat poorly drained Roby soils in the slightly higher positions

Soil Properties and Qualities

Parent material: Lacustrine deposits

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: 10 to 20 inches to abrupt textural change

Available water capacity: About 9.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Rare; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Farmland of statewide importance

Hydric soil: Yes

7460A—Ginat silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit

Composition

Ginat and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Areas where the surface layer is loam or very fine sandy loam

Dissimilar soils:

- Somewhat poorly drained Roby soils in slope positions similar to those of the Ginat soil

Soil Properties and Qualities

Parent material: Silty alluvium over clayey alluvium and/or loamy alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Perched; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot
Flooding (frequency, months): Rare; January to June
Potential for frost action: High
Corrosivity: High for steel and high for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland: Prime farmland if drained
Hydric soil: Yes

7462A—Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Summit

Composition

Sciotoville and similar soils: 95 percent
Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thinner than those of the Sciotoville soil
- Areas that have a loam subsoil

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Sciotoville soil
- Poorly drained Ginat soils on footslopes

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April

Flooding (frequency, months): Rare; January to April
Potential for frost action: High
Corrosivity: Moderate for steel and high for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland: All areas are prime farmland
Hydric soil: No

7462B—Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Summit and shoulder

Composition

Sciotoville and similar soils: 95 percent
Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thinner than those of the Sciotoville soil
- Areas that have a loam subsoil

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Sciotoville soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April
Flooding (frequency, months): Rare; January to April
Potential for frost action: High
Corrosivity: Moderate for steel and high for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland: All areas are prime farmland
Hydric soil: No

7462C2—Sciotoville silt loam, 5 to 10 percent slopes, eroded, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Backslope

Composition

Sciotoville and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thinner or thicker than those of the Sciotoville soil
- Areas that have a loam subsoil

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Sciotoville soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April

Flooding (frequency, months): Rare; January to April

Accelerated erosion: Surface layer has been thinned by erosion

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: Farmland of statewide importance

Hydric soil: No

7462C3—Sciotoville silt loam, 5 to 10 percent slopes, severely eroded, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Backslope

Composition

Sciotoville and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thicker than those of the Sciotoville soil
- Areas that have a loam subsoil

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Sciotoville soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.5 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April

Flooding (frequency, months): Rare; January to April

Accelerated erosion: Surface layer is mostly subsoil material

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

7462D2—Sciotoville silt loam, 10 to 18 percent slopes, eroded, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Backslope

Composition

Sciotoville and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thinner or thicker than those of the Sciotoville soil
- Areas that have a loam subsoil

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Sciotoville soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April
Flooding (frequency, months): Rare; January to April
Accelerated erosion: Surface layer has been thinned by erosion
Potential for frost action: High
Corrosivity: Moderate for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland: Farmland of statewide importance
Hydric soil: No

7462D3—Sciotoville silt loam, 10 to 18 percent slopes, severely eroded, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Backslope

Composition

Sciotoville and similar soils: 95 percent
Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Soils that have surface horizons that are thicker than those of the Sciotoville soil
- Areas that have a loam subsoil

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Sciotoville soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.5 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table (kind, depth, months): Perched; 1.5 feet; January to April
Flooding (frequency, months): Rare; January to April

Accelerated erosion: Surface layer is mostly subsoil material

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: High

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e

Prime farmland: Farmland of statewide importance

Hydric soil: No

7463A—Wheeling silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Summit

Composition

Wheeling and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that are sandy
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Wheeling soil
- Poorly drained Ginat soils on footslopes

Soil Properties and Qualities

Parent material: Loamy alluvium and/or silty alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.8 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Rare; January to April

Potential for frost action: Moderate

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2s

Prime farmland: All areas are prime farmland

Hydric soil: No

7463B—Wheeling silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Shoulder and summit

Composition

Wheeling and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that have surface horizons that are thinner than those of the Wheeling soil
- Areas that are sandy
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Wheeling soil

Soil Properties and Qualities

Parent material: Loamy alluvium and/or silty alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.8 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Rare; January to April

Potential for frost action: Moderate

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

7463C2—Wheeling silt loam, 5 to 10 percent slopes, eroded, rarely flooded

Setting

Landform on landscape: Terrace in valley

Position on landform: Backslope

Composition

Wheeling and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that have surface horizons that are thicker or thinner than those of the Wheeling soil
- Areas that are sandy
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Wheeling soil

Soil Properties and Qualities

Parent material: Loamy alluvium and/or silty alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 6.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Rare; January to April

Accelerated erosion: Surface layer has been thinned by erosion

Potential for frost action: Moderate

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3e

Prime farmland: Farmland of statewide importance

Hydric soil: No

**7463D3—Wheeling silt loam, 10 to 18 percent slopes,
severely eroded, rarely flooded**

Setting

Landform on landscape: Terrace in valley

Position on landform: Backslope

Composition

Wheeling and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are occasionally flooded
- Areas that have surface horizons that are thicker than those of the Wheeling soil
- Areas that are sandy
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Alvin soils in slope positions similar to those of the Wheeling soil

Soil Properties and Qualities

Parent material: Loamy alluvium and/or silty alluvium

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.4 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Rare; January to April
Accelerated erosion: Surface layer is mostly subsoil material
Potential for frost action: Moderate
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: High
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland: Farmland of statewide importance
Hydric soil: No

7711A—Hatfield silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Summit

Composition

Hatfield and similar soils: 95 percent
Dissimilar soils: 5 percent

Similar soils:

- Soils that have thinner or thicker surface horizons than the Hatfield soil

Dissimilar soils:

- Somewhat poorly drained Roby soils in slope positions similar to those of the Hatfield soil
- Poorly drained Ginat soils on footslopes

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Perched; 0.5 foot; January to May
Flooding (frequency, months): Rare; January to May
Potential for frost action: High

Corrosivity: High for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland: Prime farmland if drained
Hydric soil: No

7711B—Hatfield silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform on landscape: Terrace in valley
Position on landform: Summit and shoulder

Composition

Hatfield and similar soils: 95 percent
Dissimilar soils: 5 percent

Similar soils:

- Soils that have surface horizons that are thinner or thicker than those of the Hatfield soil

Dissimilar soils:

- Somewhat poorly drained Roby soils in slope positions similar to those of the Hatfield soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Perched; 0.5 foot; January to May
Flooding (frequency, months): Rare; January to May
Potential for frost action: High
Corrosivity: High for steel and high for concrete
Potential for surface runoff: High
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland: Prime farmland if drained
Hydric soil: No

8070A—Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Beaucoup and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:

- Well drained Armiesburg soils in the higher-lying areas

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.2 inches to a depth of 60 inches

Organic matter content in surface layer: 5.0 to 6.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 2w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8071A—Darwin silty clay, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Darwin and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight ridges

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.8 inches to a depth of 60 inches

Organic matter content in surface layer: 4.0 to 5.0 percent

Shrink-swell potential: Very high

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: Moderate

Corrosivity: High for steel and low for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

**8072A—Sharon silt loam, 0 to 3 percent slopes,
occasionally flooded**

Setting

Landform on landscape: Flood plain in valley

Composition

Sharon and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas of sandy soils
- Areas that have thin layers of sandy, gravelly, or stony material
- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Belknap soils in shallow depressions

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Soil Survey of Alexander County, Illinois

Available water capacity: About 11.7 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 3.0 feet; January to April

Flooding (frequency, months): Occasional; January to May

Potential for frost action: High

Corrosivity: Low for steel and high for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland: All areas are prime farmland

Hydric soil: No

8085A—Jacob silty clay, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Jacob and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight ridges

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.2 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 4.0 percent

Shrink-swell potential: Very high

Seasonal high water table (kind, depth, months): Perched; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: Moderate

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 4w

Prime farmland: Farmland of statewide importance

Hydric soil: Yes

8092B—Sarpy sand, 1 to 8 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Sarpy and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas where slopes are short and steep
- Areas that are rarely or frequently flooded

Dissimilar soils:

- Well drained Ware soils in slope positions similar to those of the Sarpy soil
- Moderately well drained Medway soils in slope positions similar to those of the Sarpy soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Excessively drained

Slowest permeability within a depth of 40 inches: Rapid

Permeability below a depth of 60 inches: Rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 4.2 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 1.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Occasional; January to May

Potential for frost action: Low

Corrosivity: Low for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: High

Interpretive Groups

Land capability classification: 4s

Prime farmland: Farmland of statewide importance

Hydric soil: No

8108A—Bonnie silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Bonnie and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Belknap soils in the slightly higher positions of the flood plain

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8109A—Raccoon silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Fan on upland

Position on landform: Footslope

Composition

Raccoon and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that have a surface layer of loam or very fine sandy loam

Dissimilar soils:

- Well drained Alvin soils in the higher slope positions

Soil Properties and Qualities

Parent material: Loess over silty alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 2.5 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot
Flooding (frequency, months): Occasional; January to June
Potential for frost action: High
Corrosivity: High for steel and high for concrete
Potential for surface runoff: Medium
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland: Prime farmland if drained
Hydric soil: Yes

8162A—Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Gorham and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas where the surface layer is loamy
- Areas that are rarely or frequently flooded

Dissimilar soils:

- Moderately well drained Medway soils on slight rises

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Organic matter content in surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot
Flooding (frequency, months): Occasional; January to June

Potential for frost action: High
Corrosivity: High for steel and low for concrete
Potential for surface runoff: Very low
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland: Prime farmland if drained
Hydric soil: Yes

8175B—Lamont fine sandy loam, 2 to 7 percent slopes, occasionally flooded

Setting

Landform on landscape: Dune in valley

Composition

Lamont and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Somewhat poorly drained Roby soils in the lower areas
- Well drained Alvin and Landes soils in slope positions similar to those of the Lamont soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Organic matter content in surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Occasional; January to May
Potential for frost action: Moderate
Corrosivity: Low for steel and moderate for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Moderate
Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland: All areas are prime farmland
Hydric soil: No

8178A—Ruark fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Fan on upland

Position on landform: Footslope

Composition

Ruark and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that have dark surface layers

Dissimilar soils:

- Well drained Alvin soils in the higher slope positions

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.5 inches to a depth of 60 inches

Organic matter content in surface layer: 0.5 to 2.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8180A—Dupo silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Dupo and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Wakeland soils and well drained Haymond soils in the slightly higher areas

Soil Properties and Qualities

Parent material: Silty alluvium over clayey alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural change

Available water capacity: About 10.3 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Perched; 0.5 foot; January to May

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland: All areas are prime farmland

Hydric soil: No

8184A—Roby fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Fan on upland

Position on landform: Footslope

Composition

Roby and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that have a surface layer of loam or very fine sandy loam

Dissimilar soils:

- Well drained Alvin soils in the more sloping areas
- Poorly drained Ruark soils on footslopes

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Soil Survey of Alexander County, Illinois

Available water capacity: About 7.8 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 2s

Prime farmland: All areas are prime farmland

Hydric soil: No

8184B—Roby fine sandy loam, 2 to 5 percent slopes, occasionally flooded

Setting

Landform on landscape: Fan on upland

Position on landform: Footslope

Composition

Roby and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that have a surface layer of loam or very fine sandy loam

Dissimilar soils:

- Well drained Alvin soils in the more sloping areas

Soil Properties and Qualities

Parent material: Sandy alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.8 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: Moderate for steel and high for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderately high

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

8284A—Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Tice and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that have loamy overwash

Dissimilar soils:

- Moderately well drained Medway soils on slight rises
- Poorly drained Darwin soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.6 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: High

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 2w

Prime farmland: All areas are prime farmland

Hydric soil: No

8288A—Petrolia silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Petrolia and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that have silty overwash
- Areas that are rarely or frequently flooded

Dissimilar soils:

- Soils that are not ponded and are better drained than the Petrolia soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8331A—Haymond silt loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Haymond and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Somewhat poorly drained Wakeland soils in slightly depressional areas
- Well drained or somewhat excessively drained Elsah soils adjacent to stream channels
- Moderately well drained Burnside soils in narrow flood plains

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Flooding (frequency, months): Occasional; January to May
Potential for frost action: High
Corrosivity: Low for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w
Prime farmland: All areas are prime farmland
Hydric soil: No

8333A—Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Wakeland and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded

Dissimilar soils:

- Well drained Haymond soils on slight rises
- Poorly drained Birds soils in slight depressions

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May
Flooding (frequency, months): Occasional; January to June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland: Prime farmland if drained

Hydric soil: No

8334A—Birds silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Birds and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Wakeland soils in the slightly higher portions of the flood plain

Soil Properties and Qualities

Parent material: Silty alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8382A—Belknap silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Belknap and similar soils: 95 percent

Dissimilar soils: 5 percent

Similar soils:

- Areas that are rarely flooded or frequently flooded
- Soils that have a seasonal high water table at a depth of less than 2.0 feet
- Soils that are moderately acid to slightly alkaline

Dissimilar soils:

- Moderately well drained Sharon soils in the slightly higher areas of the flood plain
- Poorly drained Bonnie soils on toeslopes
- Poorly drained Piopolis soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained

Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow or moderate

Depth to restrictive feature: More than 80 inches

Available water capacity: About 12.4 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 0.5 foot; January to May

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2w

Prime farmland: Prime farmland if drained

Hydric soil: No

8420A—Piopolis silty clay loam, 0 to 3 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Piopolis and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that have silty overwash

Dissimilar soils:

- Soils that are not ponded and are better drained than the Piopolis soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 11.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8422A—Cape silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Cape and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely flooded or frequently flooded
- Areas with short steep slopes

Dissimilar soils:

- Soils on slight rises that are coarser textured and better drained than the Cape soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.7 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Low

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8422A+—Cape silt loam, overwash, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Cape and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas with thin or no overwash
- Areas with short steep slopes

Dissimilar soils:

- Soils on slight rises that are coarser textured and better drained than the Cape soil

Soil Properties and Qualities

Parent material: Silty overbank deposits over alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 9.6 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.5 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and high for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Prime farmland if drained

Hydric soil: Yes

8426A—Karnak clay, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Karnak and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Overflow channels where silty overwash is evident
- Areas that are rarely or frequently flooded
- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Soils that are more acid than the Karnak soil
- Soils on slight rises that are coarser textured and better drained than the Karnak soil

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.0 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Very low

Water erosion susceptibility: Low

Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 3w

Prime farmland: Farmland of statewide importance

Hydric soil: Yes

8426A+—Karnak silt loam, overwash, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Karnak and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas where there is no silty overwash
- Areas that are rarely or frequently flooded
- Areas that are occasionally flooded and/or flooded for shorter durations

Dissimilar soils:

- Soils that are more acid than the Karnak soil
- Soils on slight rises that are coarser textured and better drained than the Karnak soil

Soil Properties and Qualities

Parent material: Silty overbank deposits over alluvium

Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Very slow

Permeability below a depth of 60 inches: Very slow or slow

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.2 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High

Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June

Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June

Potential for frost action: High

Corrosivity: High for steel and moderate for concrete

Potential for surface runoff: Medium

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 3w

Prime farmland: Farmland of statewide importance

Hydric soil: Yes

8452A—Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Riley and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that are wet or ponded for long duration
- Areas with overwash of fine sandy loam

Dissimilar soils:

- Recently flooded and scoured areas with sandy deposits
- Poorly drained Gorham soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 12 to 27 inches to strongly contrasting textural stratification
Available water capacity: About 7.5 inches to a depth of 60 inches
Organic matter content in surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May
Flooding (frequency, months): Occasional; January to June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Potential for surface runoff: High
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 2w
Prime farmland: All areas are prime farmland
Hydric soil: No

8452B—Riley silty clay loam, 2 to 5 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Riley and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that are wet or ponded for long durations
- Areas with overwash of fine sandy loam

Dissimilar soils:

- Recently flooded and scoured areas with sandy deposits
- Poorly drained Gorham soils on toeslopes

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 12 to 27 inches to strongly contrasting textural stratification
Available water capacity: About 7.5 inches to a depth of 60 inches
Organic matter content in surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Seasonal high water table (kind, depth, months): Apparent; 1.0 foot; January to May
Flooding (frequency, months): Occasional; January to June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Potential for surface runoff: High

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

8456B—Ware loam, 1 to 6 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Ware and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas that are sandy
- Areas where slopes are short and steep

Dissimilar soils:

- Moderately well drained Medway soils on low ridges and natural levees along sloughs or overflow channels of flood plains

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.9 inches to a depth of 60 inches

Organic matter content in surface layer: 2.0 to 3.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Occasional; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Low

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2s

Prime farmland: All areas are prime farmland

Hydric soil: No

8475B—Elsah silt loam, 1 to 4 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Elsah and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas where the silty surface layer is more than 25 inches thick
- Areas where bedrock is within a depth of 40 inches

Dissimilar soils:

- Somewhat poorly drained Wakeland soils in depressional areas
- Well drained Haymond soils on flood plains

Soil Properties and Qualities

Parent material: Gravelly and cobbly loamy alluvium derived from chert

Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderately rapid or rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 7.2 inches to a depth of 60 inches

Organic matter content in surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Low

Flooding (frequency, months): Occasional; January to May

Potential for frost action: Moderate

Corrosivity: Low for steel and moderate for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Low

Interpretive Groups

Land capability classification: 2s

Prime farmland: All areas are prime farmland

Hydric soil: No

8589B—Bowdre silty clay, 1 to 6 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Bowdre and similar soils: 90 percent

Dissimilar soils: 10 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas along overflow channels where loamy overwash is evident

Dissimilar soils:

- Well drained Ware soils in the slightly higher areas
- Poorly drained Cairo soils on toeslopes

Soil Properties and Qualities

Parent material: Clayey alluvium over loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: 12 to 20 inches to strongly contrasting textural stratification
Available water capacity: About 11.3 inches to a depth of 60 inches
Organic matter content in surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Apparent; 1.5 feet; January to May
Flooding (frequency, months): Occasional; January to May
Potential for frost action: None
Corrosivity: High for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 2w
Prime farmland: All areas are prime farmland
Hydric soil: No

8590A—Cairo silty clay, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Cairo and similar soils: 90 percent
Dissimilar soils: 10 percent

Similar soils:

- Soils that are moderately acid or strongly acid in the subsoil
- Areas that are rarely or frequently flooded

Dissimilar soils:

- Somewhat poorly drained Bowdre soils on slight rises

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: 20 to 39 inches to strongly contrasting textural stratification
Available water capacity: About 7.6 inches to a depth of 60 inches
Organic matter content in surface layer: 5.0 to 7.0 percent
Shrink-swell potential: High
Seasonal high water table (kind, depth, months): Apparent; at the surface; January to June
Ponding (average depth during wettest periods or after heavy rainfall): 0.2 foot

Flooding (frequency, months): Occasional; January to June
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Potential for surface runoff: Very low
Water erosion susceptibility: Low
Wind erosion susceptibility: Moderate

Interpretive Groups

Land capability classification: 3w
Prime farmland: Prime farmland if drained
Hydric soil: Yes

8597A—Armiesburg silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Armiesburg and similar soils: 85 percent
Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely flooded or frequently flooded
- Soils that have a seasonal high water table at a depth of less than 3.5 feet

Dissimilar soils:

- Well drained Ware soils in slope positions similar to those of the Armiesburg soil
- Moderately well drained Medway soils in slope positions similar to those of the Armiesburg soil

Soil Properties and Qualities

Parent material: Alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Organic matter content in surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding (frequency, months): Occasional; January to May
Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Potential for surface runoff: Low
Water erosion susceptibility: Low
Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 2w
Prime farmland: All areas are prime farmland
Hydric soil: No

8682B—Medway silty clay loam, 1 to 6 percent slopes, occasionally flooded

Setting

Landform on landscape: Flood plain in valley

Composition

Medway and similar soils: 85 percent

Dissimilar soils: 15 percent

Similar soils:

- Areas that are rarely or frequently flooded
- Areas along overflow channels where loamy overwash is present
- Areas where slopes are short and steep

Dissimilar soils:

- Well drained Ware soils on slight rises
- Somewhat poorly drained Bowdre soils in similar or lower-lying positions
- Poorly drained Gorham soils in lower-lying positions

Soil Properties and Qualities

Parent material: Alluvium

Drainage class: Moderately well drained

Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate or moderately rapid

Depth to restrictive feature: More than 80 inches

Available water capacity: About 8.8 inches to a depth of 60 inches

Organic matter content in surface layer: 3.0 to 6.0 percent

Shrink-swell potential: Low

Seasonal high water table (kind, depth, months): Apparent; 1.5 feet; January to April

Flooding (frequency, months): Occasional; January to May

Potential for frost action: High

Corrosivity: High for steel and low for concrete

Potential for surface runoff: Low

Water erosion susceptibility: Moderate

Wind erosion susceptibility: Very low

Interpretive Groups

Land capability classification: 2e

Prime farmland: All areas are prime farmland

Hydric soil: No

MW—Miscellaneous water

This map unit consists of manmade areas that are used for industrial, sanitary, or mining applications and that contain water most of the year.

This map unit is not assigned any interpretive groups.

W—Water

This map unit consists of natural water bodies and impoundments generally used for livestock water supplies, as wetland wildlife habitat, or for recreational purposes.

This map unit is not assigned any interpretive groups.

Use and Management of the Soils

This survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are not limited, somewhat limited, and very limited. The suitability ratings are expressed as well suited, moderately suited, poorly suited, and unsuited or as good, fair, and poor.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Agronomy

General management needed for crops and pasture is suggested in this section. The system of land capability classification used by the Natural Resources Conservation Service is explained, the estimated yields of the main crops and pasture plants are listed for each soil, and prime farmland is described.

Planners of management systems for individual fields or farms should consider obtaining specific information from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The soils in Alexander County have good potential for continued crop production, especially if the latest crop production technology is applied. This soil survey can be used as a guide for applying the latest crop production technology.

The demand for food and fiber has increased in recent years. As a result, some land of marginal quality has been used for crops. Much of this land is more susceptible to erosion than the more productive land. In addition, the number of residential tracts has increased throughout the county. These tracts commonly are in areas of prime farmland. If these trends continue, they could result in a significant decline in the quality and quantity of the land used for food and fiber.

Limitations and Hazards Affecting Cropland

The management concerns affecting the use of the detailed soil map units in the survey area for crops are shown in table 5. The main concerns include crusting, flooding, ponding, poor tilth, water erosion, and wetness. Excessive permeability, a high pH, limited available water capacity, and wind erosion are additional concerns.

Crusting occurs when flowing water or raindrops break down soil structural units, thus moving clay downward and resulting in a concentration of sand and silt particles on the surface layer. Crusts can reduce the rate of water infiltration, increase the runoff rate, inhibit seedling emergence and proper growth, and reduce oxygen diffusion to seedlings.

Practices that minimize surface crusting protect the surface from the impact of raindrops and flowing water. Incorporating green manure crops, manure, or crop residue into the soil and using a system of conservation tillage help to prevent crusting by improving tilth.

Flooding occurs in unprotected areas along major rivers and their tributaries. Levees or diversions reduce the extent of crop damage caused by floodwater. Surface drainage ditches can remove floodwater if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning. Selecting crop varieties adapted to a shorter growing season and wetter conditions can also reduce the extent of damage caused by flooding.

Ponding is a hazard in areas where the seasonal high water table is above the surface. Land grading helps to control ponding. Surface ditches and surface inlet tiles also help to remove excess water if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning.

Poor tilth can occur in soils when part of the subsoil is incorporated into the plow layer, typically as a result of the thinning of the surface layer by erosion. The

incorporation of subsoil material into the plow layer decreases the amount of organic matter and increases the clay content in the surface soil. Intensive rainfall can result in the formation of a crust on the surface. Poor tilth also occurs in poorly drained soils that have a high clay content, regardless of organic matter content, and in soils that have been excessively tilled. Poor tilth reduces the rate of water infiltration and increases the runoff rate and the hazard of erosion in the more sloping areas. Soils with poor tilth generally have a surface layer that is sticky when wet and hard and cloddy when dry. Because these soils can be tilled only within a narrow range of moisture content, seedbed preparation is difficult. Regularly returning crop residue to the soil, adding other organic material to the soil, minimizing tillage, and timing conservation tillage operations to near optimal soil moisture conditions can improve tilth.

Water erosion can occur if the surface soil is not protected against the impact of raindrops. Erosion leads to a reduction in soil aggregate stability, which reduces the rate of water infiltration and increases the rate of surface runoff. Soils with long or steep slopes are more susceptible to water erosion than other soils. Erosion, primarily sheet and rill erosion, removes the surface soil, which commonly has the highest amount of biological activity and the highest content of organic matter. The productivity of the soil is reduced as the content of organic matter and the level of natural fertility are lowered. Poor tilth and crusting can occur when the subsoil, which generally has a higher content of clay than the surface layer, is incorporated through tillage into the plow layer. Excessive runoff can impact the quality of surface water through sedimentation and contamination by pesticides.

Erosion can be controlled by a conservation tillage system that leaves crop residue on the surface after planting or by a cropping system that rotates grasses and legumes in the cropping sequence. On soils with long, uniform slopes, contour farming and/or terraces in combination with a conservation tillage system can help to control erosion.

Wetness is a limitation when the seasonal high water table is at or near the surface. Subsurface tile drains can lower the seasonal high water table if suitable outlets are available. In soils that have a high content of clay and restricted permeability, subsurface drainage may not be practical. In these soils, surface ditches can reduce the wetness. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning.

Excessive permeability can occur in soils that have a high content of sand, which has many large pores. The capacity of these soils to retain moisture for plant use is limited. Deep leaching of nutrients and pesticides is possible, and this increases the risk of ground-water pollution. Irrigation can supply the moisture needed for crops. Also, frequent applications of a small amount of fertilizer are needed; one application of a large amount of fertilizer can result in excessive leaching of plant nutrients.

A pH of more than 8.3 is a limitation. This limitation can affect the availability of many plant nutrients and influences the effectiveness of herbicides. More frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Crops may respond well to additions of phosphate fertilizer in areas where the soils are limited by a high pH. The applications of herbicides should be adjusted as the level of alkalinity increases. Incorporating green manure crops, manure, or crop residue into the soil, applying a system of conservation tillage, and using conservation cropping systems also help to overcome this limitation.

Limited available water capacity can occur in soils that have a high content of sand, a low content of clay, and a low content of organic matter. Reducing the evaporation and runoff rates and increasing the rate of water infiltration can conserve soil moisture. Measures that conserve soil moisture include applying conservation tillage and conservation cropping systems, establishing field windbreaks, and leaving crop residue on the surface.

Wind erosion can occur when the surface of the soil is not protected. Wind erosion can be controlled by applying a system of conservation tillage that leaves crop residue on the surface after planting, by using tillage systems that leave the surface rough, by establishing field windbreaks, and by regularly adding organic material to the soil.

Following are explanations of the criteria used to determine the limitations listed in the table:

Crusting.—The average content of organic matter in the surface layer is less than or equal to 2.5 percent, and the content of clay is between 20 and 35 percent.

Excessive permeability.—The lower limit of the permeability rate is more than 6 inches per hour within the soil profile.

Flooding.—The soil is subject to occasional or frequent flooding.

High pH.—The upper limit of pH within a depth of 40 inches is more than 8.3.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

Ponding.—Water is above the surface. The upper limit of the ponding depth is more than 0 inches.

Poor tilth.—The content of clay in the surface layer is 27 percent or more.

Water erosion.—The Kw factor multiplied by the slope is more than 0.8, and the slope is 3 percent or more.

Wetness.—The seasonal high water table is within a depth of 1.5 feet at some time during the growing season during normal years.

Wind erosion.—The wind erodibility group is 1 or 2. Erosion factors (such as the Kw factor) and wind erodibility groups are described under the heading “Physical Properties.”

Limitations and Hazards Affecting Pastureland

Management concerns affecting the use of the detailed soil map units in the survey area for pasture are shown in table 5. The main concerns in managing pastureland are low fertility, a low pH, water erosion, and wetness. Additional management concerns include equipment limitations, excessive permeability, flooding, frost heave, a high pH, limited available water capacity, ponding, poor tilth, and wind erosion.

Low fertility occurs in soils that have a low content of organic matter and a low cation-exchange capacity. The capacity of the soil to retain nutrients for plant use is limited. Frequent applications of small amounts of fertilizer help to prevent excessive loss of plant nutrients through leaching. Including legumes as part of a seeding mixture can provide nitrogen to the grass varieties. Timely deferment of grazing helps to maintain a vegetative cover on the surface and maintains the content of organic matter, which is a source of nutrients in the soil.

A pH of 5.5 or less is considered low and a soil limitation. This limitation can reduce solubility and availability of nutrients for plant growth. Selecting adapted forage and hay varieties and applying lime according to the results of soil tests can help to overcome this limitation.

Water erosion can occur in overgrazed areas or during pasture establishment and renovation, when the surface soil is not protected against raindrop impact. Water erosion results in poor tilth, which reduces the rate of water infiltration and increases the runoff rate. Soils with long or steep slopes also are susceptible to water erosion. Erosion can be controlled by deferred grazing, which prevents overgrazing and thus also helps to prevent surface compaction and excessive runoff and erosion. Tilling on the contour, using a no-till system of seeding when a seedbed is prepared or the pasture is renovated, and selecting adapted forage and hay varieties also help to control erosion.

Wetness occurs when the seasonal high water table is at or near the surface.

Subsurface tile drains help to lower the seasonal high water table if suitable outlets are available. Management of drainage in conformance with regulations may require special permits and extra planning. Selecting forage and hay varieties adapted to wet conditions can improve forage production. Restricting use during wet periods helps to keep the pasture in good condition.

Equipment limitations occur in areas that have slopes of more than 18 percent. They can cause rapid wear of equipment and can create problems with fertilization, harvest, pasture renovation, and seedbed preparation. Equipment limitations cannot be easily overcome.

Excessive permeability can occur in soils that have a high content of sand and thus have many large pores. The capacity of these soils to retain moisture for plant use is limited. The deep leaching of nutrients and pesticides that can result can increase the risk of ground-water pollution. Irrigation can be used to supply the moisture needed for plant growth. Frequent applications of a small amount of fertilizer are needed; a single application of a large amount of fertilizer can result in excessive leaching of plant nutrients.

Flooding occurs in unprotected areas along the major rivers and their tributaries. Surface drainage ditches can help to remove floodwater if suitable outlets are available. Management of drainage in conformance with regulations may require special permits and extra planning. Selecting forage and hay varieties adapted to a shorter growing season and wetter conditions also reduces the extent of flood damage. Restricted use during wet periods helps to keep the pasture in good condition.

Frost heave occurs when ice lenses or bands develop in the soil and drive an ice wedge between two layers of soil near the surface layer. The ice wedges heave the overlying soil layer upward, snapping the roots. Soils in which the texture is low in sand have small pores that hold water and enable ice lenses to form. Selecting adapted forage and hay varieties can reduce the effects of frost heave. Timely deferment of grazing helps to maintain a vegetative cover on the surface to insulate the soil, and thus it reduces the effects of frost heave.

A pH of more than 8.3 is considered high and is a soil limitation. This limitation affects the availability of many nutrients for plant growth. More frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Selecting adapted forage and hay varieties helps to overcome this limitation.

Limited available water capacity can occur in soils that have a high content of sand, a low content of clay, and a low content of organic matter. Reducing the evaporation and runoff rates and increasing the rate of water infiltration can conserve soil moisture. Measures that conserve soil moisture include applying conservation tillage and conservation cropping systems, establishing field windbreaks, and leaving crop residue on the surface.

Ponding occurs when the seasonal high water table is above the surface. Land grading helps to control ponding. Surface ditches and surface inlet tile also help to remove excess water if suitable outlets are available. Management of drainage in conformance with regulations may require special permits and extra planning. Selecting forage and hay varieties adapted to wet conditions can improve forage production. Restricting use during wet periods helps to keep the pasture in good condition.

Poor tilth can occur in soils when part of the subsoil is incorporated into the plow layer, typically as a result of the thinning of the surface layer by erosion. Poor tilth reduces the content of organic matter and increases the clay content in the surface soil. Intensive rainfall often results in the formation of a crust on the surface. Poor tilth also occurs in poorly drained soils that have a high content of clay, regardless of organic matter content, and in soils that have been excessively tilled. Poor tilth reduces

the rate of water infiltration and increases the runoff rate and the hazard of erosion in the more sloping areas. Soils with poor tilth generally have a surface layer that is sticky when wet and hard and cloddy when dry. Because they can be tilled only within a narrow range of moisture content, seedbed preparation is difficult. Minimizing tillage and timing conservation tillage operations to near optimal soil moisture conditions during pasture establishment or pasture renovation can improve tilth.

Wind erosion can occur in overgrazed areas or during pasture establishment and renovation if the surface of the soil is not protected. Wind erosion can be controlled by applying a system of conservation tillage that leaves residue on the surface after planting, by using tillage systems that leave the surface rough, by establishing field windbreaks, and by regularly adding organic material to the soil.

Following are explanations of the criteria used to determine the limitations listed in the table:

Equipment limitation.—The slope is more than 18 percent.

Excessive permeability.—The lower limit of the permeability rate is more than 6 inches per hour within the soil profile.

Flooding.—The soil is subject to occasional or frequent flooding.

Frost heave.—The potential for frost action is moderate or high, and the soil is poorly drained or very poorly drained.

High pH.—The upper limit of pH within a depth of 40 inches is more than 8.3.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

Low fertility.—The average content of organic matter in the surface layer is less than 1 percent, or the cation-exchange capacity is 7 or less.

Low pH.—The lower limit of pH within a depth of 40 inches is less than or equal to 5.5.

Ponding.—Water is above the surface. The upper limit of the ponding depth is more than 0 inches.

Poor tilth.—The content of clay in the surface layer is 27 percent or more.

Water erosion.—The Kw factor multiplied by the slope is more than 1, and the slope is 3 percent or more.

Wetness.—The seasonal high water table is within a depth of 1.5 feet.

Wind erosion.—The wind erodibility group is 1 or 2. Erosion factors (such as the Kw factor) and wind erodibility groups are described under the heading “Physical Properties.”

Yields per Acre of Cropland and Pasture

The average yields per acre that can be expected of the principal crops and pasture plants under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered. The yields in this soil survey for corn, soybeans, wheat, grain sorghum, and hay represent high levels of management, based on data from the University of Illinois (9). The yields in this soil survey for pasture represent average levels of management, based on data from the University of Illinois (10).

The management needed to obtain the indicated yields of the various crops and pasture plants depends on the kind of soil and the plant species. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding plant varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and

optimum levels of nitrogen, phosphorus, potassium, and trace elements for each species; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops and pasture plants. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops and pasture plants other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. The capability classification of map units in the survey area is given in table 6. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for woodland or for engineering purposes.

In the capability system, soils generally are grouped at three levels—capability class, subclass, and unit (20). These categories indicate the degree and kinds of limitations affecting mechanized farming systems that produce the more commonly grown field crops, such as corn, small grain, cotton, hay, and field-grown vegetables. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use.

If properly managed, soils in classes 1, 2, 3, and 4 are suitable for the mechanized production of commonly grown field crops and for pasture and woodland. The degree of the soil limitations affecting the production of cultivated crops increases progressively from class 1 to class 4. The limitations can affect levels of production and the risk of permanent soil deterioration caused by erosion and other factors.

Soils in classes 5, 6, and 7 are generally not suited to the mechanized production of commonly grown field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The severity of the soil limitations affecting crops increases progressively from class 5 to class 7. Areas in class 8 are generally not suitable for crops, pasture, or woodland without a level of management that is impractical. These areas may have potential for other uses, such as recreational facilities and wildlife habitat.

Capability subclasses identify the dominant kind of limitation in the class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, 2*e*. The letter *e* shows that the main hazard is the risk of erosion unless a close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class 1 because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use mainly to pasture, woodland, wildlife habitat, or recreation.

The land capability classification of map units in the survey area is shown in the table and in the "Detailed Soil Map Units" section.

Prime Farmland

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils results in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, or woodland or for other purposes. They either are used for food and fiber or are available for these uses. Urban or built-up land, public land, and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures. Public land is land not available for farming in National forests, National parks, military reservations, and State parks.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable, and the level of acidity or alkalinity and the content of salts and sodium are acceptable. The soils have few, if any, rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding. Slopes range mainly from 0 to 6 percent.

Soils that have a zone high in the profile in which the soil moisture status is wet or soils that are subject to flooding may qualify as prime farmland where these limitations are overcome by drainage measures or flood control. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

The map units in the survey area that meet the requirements for prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On some soils included in the table, measures that overcome limitations are needed. The need for these measures is indicated in parentheses after the map unit name. The location of each map unit is shown on the detailed soil maps. The soil qualities that affect use and management are described in the section "Detailed Soil Map Units."

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (3, 8, 13, 14). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (5). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (4). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (16) and "Keys to Soil Taxonomy" (18) and in the "Soil Survey Manual" (21).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (17).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The map units listed in table 8 meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (8).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

In general, the map units listed in table 9 do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

Forestland Management

In table 10, parts I, II, and III, interpretive ratings and information are given for various aspects of forest management.

Some rating class terms indicate the degree to which the soils are suited to a

specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsuitable indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Some rating class terms indicate the degree of limitation that restricts the use of a soil for a specific purpose. A slight rating is given to soils that have properties favorable for the use. Good performance and low maintenance can be expected. A moderate rating is given to soils that have properties that are moderately favorable for the use, and the limitation can be overcome or modified by special planning, design, or maintenance. The expected performance is somewhat less desirable than for soils rated slight. A severe rating is given to soils that have one or more properties unfavorable for the rated use. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance.

Numerical ratings in the suitability and limitation tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available at the local office of the Natural Resources Conservation Service or on the Internet.

For limitations affecting construction of *haul roads and major skid trails*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of slight indicates that no significant limitations affect construction activities, moderate indicates that one or more limitations can cause some difficulty in construction, and severe indicates that one or more limitations can make construction very difficult or very costly.

The ratings of suitability for *log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited.

The ratings of suitability for *equipment operability for logging areas* are based on slope, landscape stability, water table duration, stoniness, boulder content, soil texture, and flooding. The soils are described as well suited, moderately suited, or poorly suited.

The ratings for suitability for *mechanized site preparation* are based on soil erodibility, soil texture, soil depth, drainage, water table duration, flooding, and the amount of cobbles, stones, or boulders on the surface. The soils are described as well suited, moderately suited, or poorly suited.

For limitations affecting *prescribed burning*, the ratings are based on slope, soil texture, drainage class, and rooting depth. Soils rated slight have few limitations that affect the reestablishment of vegetation. Soils that have moderate limitations require post-burning practices to achieve the desired results. Soils that have severe limitations require post-burning practices to achieve the desired erosion control.

Ratings in the column *erosion hazard on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of slight indicates that little or no erosion is likely; moderate indicates that some erosion is likely, that the roads or trails may require occasional maintenance, or that simple erosion-control measures are needed; and severe indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited.

Forest Productivity

Information about the *potential productivity* of map unit components for merchantable or *common trees* is provided in table 11. The four common tree species are white oak, northern red oak, eastern cottonwood, and pin oak. Site indices are listed for soils where the species are commonly grown. The site indices in this soil survey are from the University of Illinois (9).

The potential productivity of a component is expressed as a *site index*. The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not originally support trees. Knowledge of how trees perform on such land can be gained only by observing and recording the performance of trees that have been planted and have survived. Many popular windbreak species are not indigenous to the areas in which they are planted.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters, a tree or shrub may grow well or grow poorly, depending on the characteristics of the soil. Each tree or shrub has definable potential heights in a given physiographic area and under a given climate. Accurate definitions of potential heights are necessary when a windbreak is planned and designed.

Table 12 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in this table are based on

measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service or from a nursery.

Recreation

The soils in the survey area are rated in table 13 according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the table are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in table 13 can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the

growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a seasonal high water table, ponding, flooding, slope, and texture of the surface layer.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Alexander County provides a variety of habitat for wildlife, including forests, pastureland, extensive bottomland areas, bluffs, and wetlands. The wildlife is also varied. There are populations of white-tailed deer, red-tailed hawks, bald eagles, wild turkey, snakes, gray squirrels, rabbits, bobwhite quail, and furbearers as well as many other nongame birds, mammals, amphibians, and reptiles. Wetland areas and streams support waterfowl, wading birds, shore birds, mink, muskrat, and a few river otters. Local conservation officials can assist in the selection of plants and the planning of wildlife habitat areas.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and

water. Wildlife habitat can be created or improved by planting the appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 14, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of good indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of fair indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of poor indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of very poor indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, sorghum, and soybeans.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, orchardgrass, brome grass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, ragweed, beggarweed, broomsedge, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, cattail, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally

wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for *openland wildlife* consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for *woodland wildlife* consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for *wetland wildlife* consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations

of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 15, parts I and II, show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and

on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Table 16, parts I and II, show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Table 17, parts I and II, give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 17, only the likelihood of finding material in suitable quantity is evaluated. There are no soils in Alexander County that rate fair or good as a source for gravel. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate

the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated good, fair, or poor as potential sources of sand and gravel. A rating of good or fair means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is an unlikely source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

The soils are rated good, fair, or poor as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 18, parts I, II, and III, give information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered slight if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; moderate if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and severe if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

This table also gives for each soil the restrictive features that affect grassed waterways and surface drains, terraces and diversions, tile drains and underground outlets, and irrigation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Grassed waterways and surface drains are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Tile drains and underground outlets remove excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock or other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Sprinkler irrigation is a method of irrigation in which water is pumped through nozzles and sprayed, or sprinkled, through the air to the ground surface.

Drip irrigation is a method of irrigation in which water is applied to the soil surface as drops of small streams through emitters.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in the tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 19 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (2) and the system adopted by the American Association of State Highway and Transportation Officials (1).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional

refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 20 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 20, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. The estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $1/3$ - or $1/10$ -bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is

dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 20, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in table 20 as the K factor (K_w and K_f) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor K_w indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor K_f indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion

by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 21 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Organic matter is the plant and animal residue at various stages of decomposition. In table 21, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have a pH of less than 5.5.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced

by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 22 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group, the first letter is for drained areas and the second is for undrained areas.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 22 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is

likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Also indicated in the table is the *kind of water table*. An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places, an upper, or perched, water table is separated from a lower one by a dry zone.

Soil Features

Table 23 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that

intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (16, 18). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 24 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning simple, plus *udalf*, the suborder of the Alfisols that has an udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective Typic identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-silty, mixed, superactive, mesic Typic Hapludalfs.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (21). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (16) and in "Keys to Soil Taxonomy" (18). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Alvin Series

Taxonomic Classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Alvin fine sandy loam; in Massac County, Illinois; in a wooded area at an elevation of about 340 feet above mean sea level, 1,070 feet west of a north-south field lane and 20 feet south of the center line of a east-west field lane in the SW1/4 SW1/4 NE1/4 SW1/4 of sec. 11, T. 14 S., R. 3 E.; USGS Mermet, Illinois topographic quadrangle; lat. 37 degrees 18 minutes 37 seconds N. and long. 88 degrees 51 minutes 07 seconds W.; UTM Zone 16, Easting 335884, Northing 4130908, NAD 83:

- A—0 to 2 inches; very dark grayish brown (10YR 3/2) fine sandy loam; grayish brown (10YR 5/2) dry; weak fine granular structure; friable; very strongly acid; abrupt smooth boundary.
- E—2 to 10 inches; dark yellowish brown (10YR 4/4) (80 percent) and yellowish brown (10YR 5/4) (20 percent) fine sandy loam; weak fine granular structure; friable; few very fine black (N 2/0) iron-manganese concretions; very strongly acid; clear smooth boundary.
- BE—10 to 16 inches; dark yellowish brown (10YR 4/4) very fine sandy loam; weak medium subangular blocky structure; friable; strongly acid; clear smooth boundary.
- Bt1—16 to 28 inches; brown (7.5YR 4/4) very fine sandy loam; moderate medium subangular blocky structure; friable; few faint reddish brown (5YR 4/4) clay films on faces of peds; very strongly acid; gradual smooth boundary.
- Bt2—28 to 42 inches; brown (7.5YR 4/4) very fine sandy loam; weak medium subangular blocky structure; friable; few faint reddish brown (5YR 4/4) clay films on faces of peds; very strongly acid; gradual smooth boundary.
- BC—42 to 58 inches; brown (7.5YR 4/4) loamy fine sand; weak coarse subangular blocky structure; friable; very strongly acid; clear smooth boundary.
- C—58 to 80 inches; brown (7.5YR 4/4) loamy fine sand; massive; friable; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 40 to more than 80 inches

Ap or A horizon:

Hue—10YR

Value—3 or 4

Chroma—1 to 4

Texture—commonly very fine sandy loam, fine sandy loam, or sandy loam; less commonly loamy sand or loamy fine sand

E, EB, or BE horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—2 to 4

Texture—very fine sandy loam, fine sandy loam, sandy loam, or loamy fine sand

Bt horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—very fine sandy loam, fine sandy loam, loam, or sandy clay loam

BC or C horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—fine sandy loam, loamy fine sand, very fine sand, or fine sand

Armiesburg Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Fluventic Hapludolls

Typical Pedon

Armiesburg silty clay loam; in Massac County, Illinois; in a cultivated field at an elevation of about 325 feet above mean sea level, approximately 360 feet north of an east-west gravel road and 310 feet east of the center of a north-south gravel road in the NE1/4 SW1/4 NE1/4 SW1/4 of sec. 28, T. 16 S., R. 6 E.; USGS Paducah East, Illinois topographic quadrangle; lat. 37 degrees 05 minutes 27 seconds N. and long. 88 degrees 33 minutes 35 seconds W.; UTM Zone 16, Easting 361383, Northing 4106087, NAD 83:

- Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; neutral; abrupt smooth boundary.
- A—6 to 15 inches; dark brown (10YR 3/3) silty clay loam, brown (10YR 5/3) dry; weak coarse subangular blocky structure; firm; many worm channels; slightly alkaline; gradual smooth boundary.
- BA—15 to 30 inches; brown (10YR 4/3) silty clay loam; weak very coarse to medium subangular blocky structure; firm; common distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds; few distinct very dark brown (10YR 2/2) and very dark grayish brown (10YR 3/2) clay bridging in root channels; slightly alkaline; diffuse smooth boundary.
- Bw1—30 to 42 inches; brown (10YR 4/4) silty clay loam and few sand grains; weak coarse to fine subangular blocky structure; firm; fine pores; few distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds; few fine prominent black (N 2/0) iron-manganese concretions; few fine shiny particles, possibly mica; slightly alkaline; diffuse smooth boundary.
- Bw2—42 to 67 inches; dark yellowish brown (10YR 4/4) silty clay loam that contains some fine sand; weak medium and fine subangular blocky structure; firm; fine pores in peds; few distinct dark grayish brown (10YR 4/2) wormcasts, organic coats, and clay films in worm channels; fine shiny grains, possibly mica; few fine prominent black (N 2/0) iron-manganese concretions; slightly alkaline; gradual wavy boundary.
- C—67 to 130 inches; dark yellowish brown (10YR 4/4) silt loam that contains some very fine sand; massive; friable; few distinct dark grayish brown (10YR 4/2) wormcasts, organic coats, and clay films in worm channels; few fine prominent black (N 2/0) iron-manganese concretions; more shiny particles than horizons above, possibly mica; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches

Depth to the base of diagnostic horizon: More than 38 inches

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silt loam or silty clay loam

BA or Bw horizon:

Hue—10YR

Value—2 to 5

Chroma—1 to 4

Texture—silt loam, silty clay loam, or clay loam

C horizon:

Hue—10YR

Value—3 to 5

Chroma—3 or 4

Texture—silt loam, silty clay loam, or loam

Beaucoup Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Fluvaquentic
Endoaquolls

Typical Pedon

Beaucoup silty clay loam; in Monroe County, Illinois; in a cultivated field, at an elevation of about 396 feet above mean sea level, approximately 2,120 feet west and 2,140 feet south of the northeast corner of sec. 17, T. 2 S., R. 11 W.; USGS Valmeyer, Illinois topographic quadrangle; lat. 38 degrees 21 minutes 53 seconds N. and long. 90 degrees 20 minutes 22 seconds W.; UTM Zone 15, Easting 732454, Northing 4249641, NAD 83:

Ap—0 to 11 inches; very dark gray (10YR 3/1) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common fine roots; neutral; abrupt smooth boundary.

AB—11 to 16 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine angular blocky structure; friable; common fine roots; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; neutral; clear smooth boundary.

Bg1—16 to 24 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate medium prismatic structure parting to moderate fine angular blocky; friable; few fine roots; few faint very dark grayish brown (2.5Y 3/2) organic coatings on faces of peds; common fine prominent reddish brown (5YR 4/4) masses of iron accumulation; slightly alkaline; clear smooth boundary.

Bg2—24 to 35 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate medium prismatic structure parting to moderate fine angular blocky; friable; few very fine roots; common faint very dark grayish brown (2.5Y 3/2) organic coatings on faces of peds; thin band of dark grayish brown (2.5Y 4/2) silt coatings, light brownish gray (2.5Y 6/2) dry, at a depth of 32 inches; common fine prominent dark red (2.5YR 3/6) masses of iron accumulation; slightly alkaline; clear smooth boundary.

Bg3—35 to 46 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; friable; few very fine roots; many faint very dark grayish brown (2.5Y 3/2) organic coatings on faces of peds; common medium prominent brown (7.5YR 4/4) and few fine prominent dark red (2.5YR 3/6) masses of iron accumulation; slightly alkaline; clear smooth boundary.

BC—46 to 80 inches; stratified yellowish brown (10YR 5/6) and gray (10YR 5/1) silty clay loam; moderate medium prismatic structure; friable; common faint dark grayish brown (2.5Y 4/2) organic coatings on faces of peds; few medium prominent reddish brown (5YR 4/3) iron depletions; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches

Soil reaction: Moderately acid to slightly alkaline throughout the particle-size control section

Ap or A horizon:

Hue—10YR or neutral

Value—2 or 3 (4 or 5 dry)

Chroma—0 to 2

Texture—silty clay loam or silt loam

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—3 to 6

Chroma—0 to 2

Texture—silty clay loam

C horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—stratified silt loam, loam, very fine sandy loam, or silty clay loam

Belknap Series

Taxonomic Classification: Coarse-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Belknap silt loam; in Wabash County, Illinois; at an elevation of about 430 feet above mean sea level, approximately 350 feet north of the center of the road on the west side of the stream, 1,000 feet east and 1,000 feet north of the center of sec. 33, T. 2 N., R. 12 W.; USGS Saint Francisville, Illinois-Indiana topographic quadrangle; lat. 38 degrees 33 minutes 52 seconds N. and long. 87 degrees 44 minutes 50.5 seconds W.; UTM Zone 16, Easting 434889, Northing 4268709, NAD 83:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine and medium granular structure; friable; strongly acid; abrupt smooth boundary.

A—7 to 13 inches; dark grayish brown (10YR 4/2) silt loam; weak thin platy structure parting to weak fine granular; friable; slightly compact as a plow pan; few medium faint brown (10YR 5/3) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; strongly acid; gradual smooth boundary.

Bg—13 to 27 inches; dark grayish brown (10YR 4/2), grayish brown (10YR 5/2), and brown (10YR 5/3) silt loam; weak medium granular structure with a tendency toward subangular blocky; friable; few medium faint light brownish gray (10YR 6/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few iron and manganese concretions; strongly acid; gradual smooth boundary.

Cg1—27 to 59 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; common fine prominent dark reddish brown (2.5YR 3/4) and yellowish brown

(10YR 5/8) masses of iron accumulation in the matrix; many iron and manganese concretions increasing in number and size as depth increases; strongly acid; gradual smooth boundary.

Cg2—59 to 80 inches; dark gray (10YR 4/1) silt loam; massive; friable; common medium faint gray (10YR 6/1) iron depletions and few medium prominent brown (7.5YR 5/4) masses of iron accumulation in the matrix; many iron and manganese concretions; moderately acid.

Range in Characteristics

Depth to base of soil development: Typically 12 to 40 inches; ranging to 60 inches

Reaction: Strongly acid or very strongly acid in the particle-size control section

Ap or A horizon:

Hue—10YR

Value—4 to 6 (6 or 7 dry); 3 in some uncultivated areas

Chroma—2 or 3

Texture—silt loam

Reaction—very strongly acid to moderately acid, except in limed areas

Bg or Bw horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—silt loam to a depth of at least 40 inches; some pedons contain strata of loam or silty clay loam below a depth of 40 inches

Cg or C horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silt loam or silt to a depth of at least 40 inches; some pedons contain strata of loam or silty clay loam below a depth of 40 inches

Birds Series

Taxonomic Classification: Fine-silty, mixed, superactive, nonacid, mesic Typic Fluvaquents

Typical Pedon

Birds silt loam; in Lawrence County, Illinois; on a nearly level slope in a cultivated field, at an elevation of about 415 feet above mean sea level, approximately 600 feet west and 50 feet north of the center of sec. 13, T. 3 N., R. 12 W.; Lawrenceville, Illinois topographic quadrangle; lat. 38 degrees 41 minutes 41 seconds N. and long. 87 degrees 41 minutes 38 seconds W.; UTM Zone 16, Easting 439655, Northing 4283134, NAD 83:

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; neutral; abrupt smooth boundary.

ACg—6 to 22 inches; gray (10YR 6/1) silt loam; weak fine granular structure; friable; common fine distinct dark yellowish brown (10YR 4/4) and brown (10YR 5/3) masses of iron accumulation in the matrix; few fine very dark grayish brown (10YR 3/2) masses of iron-manganese accumulation in the matrix; neutral; gradual smooth boundary.

Cg—22 to 60 inches; gray (10YR 6/1) silt loam; massive; friable; common medium and coarse distinct dark yellowish brown (10YR 4/4), prominent light olive brown (2.5Y

5/4), and faint grayish brown (10YR 5/2) masses of iron-manganese accumulation in the matrix; few fine brown (10YR 5/3) iron-manganese concretions throughout; slightly alkaline.

Range in Characteristics

Particle-size control section: Average of 18 to 27 percent clay and less than 15 percent fine or coarser sand

Reaction: Strongly acid to slightly alkaline to a depth of more than 40 inches; profile is not strongly acid in all parts within these depths

Ap, A, or ACg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6 (6 or 7 dry)

Chroma—1 or 2

Texture—silt loam

Cg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—3 to 7

Chroma—1 or 2

Texture—dominantly silt loam; some pedons contain strata of silty clay loam, clay loam, loam, or sandy loam below a depth of 40 inches

Bonnie Series

Taxonomic Classification: Fine-silty, mixed, active, acid, mesic Typic Fluvaquents

Typical Pedon

Bonnie silty loam; in Franklin County, Illinois; in a cultivated field at an elevation of about 419 feet above mean sea level, approximately 2,660 feet north and 1,920 feet east of the southwest corner of sec. 21, T. 5 S., R. 4 E.; USGS Ewing, Illinois topographic quadrangle; lat. 38 degrees 04 minutes 32 seconds N. and long. 88 degrees 46 minutes 17 seconds W.; UTM Zone 16, Easting 344630, Northing 4215680, NAD 83:

Ap1—0 to 5 inches; brown (10YR 5/3) silt loam; weak fine granular structure; friable; common fine and medium roots throughout; common fine rounded soft masses of iron-manganese; slightly acid; abrupt smooth boundary.

Ap2—5 to 10 inches; light brownish gray (10YR 6/2) and dark grayish brown (10YR 4/2) silt loam; weak medium angular blocky structure parting to weak medium platy; friable; common fine and medium roots throughout; common fine and medium faint brown (10YR 4/3) masses of iron accumulation; common fine rounded soft masses of iron-manganese; moderately acid; abrupt smooth boundary.

Cg1—10 to 27 inches; gray (10YR 6/1) and light gray (10YR 7/1) silt loam; massive; friable; few very fine roots throughout; common fine and medium prominent yellowish brown (10YR 5/4 and 5/6) and common medium faint grayish brown (10YR 5/2) iron depletions; common fine rounded soft masses of iron-manganese; very strongly acid; clear smooth boundary.

Cg2—27 to 80 inches; gray (10YR 6/1) silt loam; massive; friable; common fine and medium prominent yellowish brown (10YR 5/4 and 5/6) masses of iron accumulation; common fine rounded soft masses of iron-manganese; very strongly acid.

Range in Characteristics

Particle-size control section: Average of 18 to 27 percent clay and less than 10 percent sand

Reaction: Strongly acid or very strongly acid at a depth of 10 to 40 inches; very strongly acid to slightly alkaline below a depth of 40 inches

A or Ap horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 3

Texture—silt loam

Cg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—5 to 7

Chroma—0 to 2

Texture—commonly silt loam; less commonly silty clay loam below a depth of 40 inches

Bowdre Series

Taxonomic Classification: Clayey over loamy, smectitic, thermic Fluvaquentic Hapludolls

Typical Pedon

Bowdre silty clay, occasionally flooded; in Union County, Illinois; in a gently sloping cultivated field, on a ridge along sloughs and overflow channels on the Mississippi River flood plain, at an elevation of about 445 feet above mean sea level, approximately 5 miles northwest of Wolf Lake, about 200 feet south and 335 feet east of the northwest corner of sec. 24, T. 11 S., R. 4 W.; USGS Neely's Landing, Illinois-Missouri topographic quadrangle; lat. 37 degrees 33 minutes 20 seconds N. and long. 89 degrees 30 minutes 03 seconds W.; UTM Zone 16, Easting 279092, Northing 4159460, NAD 83:

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) silty clay, grayish brown (10YR 5/2) dry; moderate medium granular structure; firm; very dark gray (10YR 3/1) organic coatings on faces of peds; few fine tubular wormcasts; many fine roots; neutral; abrupt smooth boundary.

A—5 to 11 inches; very dark grayish brown (10YR 3/2) silty clay, grayish brown (10YR 5/2) dry; moderate fine and moderate medium angular blocky structure; very firm; few fine tubular wormcasts; common fine roots; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; neutral; abrupt wavy boundary.

Bw1—11 to 17 inches; brown (10YR 4/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few faint dark grayish brown (10YR 4/2) clay films on vertical faces of peds; few very dark gray (10YR 3/1) clay films on surfaces of vesicular and tubular wormcasts; common roots; few fine faint dark yellowish brown (10YR 4/4) masses of iron accumulation; slightly acid; clear smooth boundary.

2Bw2—17 to 23 inches; brown (10YR 4/3) loam; weak coarse subangular blocky structure; friable; few faint dark gray (10YR 4/1) clay films on faces of peds; common medium faint grayish brown (2.5Y 5/2) iron depletions; common roots; slightly acid; clear smooth boundary.

2C1—23 to 42 inches; dark brown (10YR 4/3) very fine sandy loam; massive; very friable; common roots and common tubular worm tunnels with few faint dark gray (10YR 4/1) clay films; many roots; common medium faint grayish brown (2.5Y 5/2)

and common fine faint dark yellowish brown (10YR 4/4) masses of iron accumulation; neutral; clear wavy boundary.

2C2—42 to 53 inches; brown (10YR 5/3) very fine sandy loam; few thin black (10YR 2/1) strata of loam and silt loam; massive; very friable; few fine roots; common fine faint dark yellowish brown (10YR 4/4) masses of iron accumulation; neutral; clear wavy boundary.

2C3—53 to 80 inches; 50 percent grayish brown (10YR 5/2), 35 percent dark gray (10YR 4/1), and 15 percent brown (10YR 5/3) stratified very fine sandy loam, loam, and silt loam; massive; very friable; few fine roots; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 8 to 14 inches

Depth to strongly contrasting particle-size class: 12 to 20 inches

A or Ap horizon:

Hue—10YR

Value—2 or 3 (4 to 5 dry)

Chroma—1 to 3

Texture—silty clay, clay, or silty clay loam

BA horizon (if it occurs):

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silty clay, clay, or silty clay loam

Bw horizon:

Hue—10YR

Value—4

Chroma—3

Texture—silty clay, clay, or silty clay loam

2Bw horizon:

Hue—10YR

Value—4 to 6

Chroma—1 to 3

Texture—silt loam, loam, sandy loam, or very fine sandy loam

2C horizon:

Hue—10YR

Value—4 to 6

Chroma—1 to 3

Texture—stratified silt loam, loam, sandy loam, or very fine sandy loam; thin strata of silty material may or may not occur

Cairo Series

Taxonomic Classification: Clayey over sandy or sandy-skeletal, smectitic over mixed, thermic Vertic Endoaquolls

Typical Pedon

Cairo silty clay; in Alexander County, Illinois; in a nearly level cultivated field, north of Illinois Route 146, near the crest of a low terrace ridge, at an elevation of about 333 feet above mean sea level, approximately 2 miles southeast of East Cape Girardeau, about 1,365 feet north and 620 feet west of the southeast corner of sec. 18, T. 14 S., R. 3 W.; USGS McClure, Illinois-Missouri topographic quadrangle; lat. 37 degrees 17

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minutes 46 seconds N. and long. 89 degrees 28 minutes 24 seconds W.; UTM Zone 16, Easting 280772, Northing 4130579, NAD 83:

- Ap—0 to 6 inches; black (10YR 2/1) silty clay, very dark gray (10YR 3/1) dry; weak fine angular blocky structure; very firm; neutral; clear smooth boundary.
- A—6 to 17 inches; very dark gray (10YR 3/1) silty clay, dark gray (10YR 4/1) dry; moderate coarse prismatic structure parting to strong medium angular blocky; very firm; many distinct very dark brown (10YR 2/2) organic coatings on faces of peds; common fine prominent yellowish brown (10YR 5/6) and common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; black (10YR 2/1) organic stains; neutral; clear smooth boundary.
- Bg1—17 to 30 inches; dark gray (10YR 4/1) silty clay; weak medium prismatic structure parting to moderate medium angular blocky; very firm; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine prominent yellowish brown (10YR 5/6) and yellowish red (5YR 5/8) masses of iron accumulation; neutral; clear smooth boundary.
- 2Bg2—30 to 32 inches; dark gray (10YR 4/1) sandy loam; weak medium angular blocky structure; firm; few small pockets of yellowish brown (10YR 5/6) loamy fine sand; many prominent strong brown (7.5YR 5/6) and yellowish red (5YR 4/8) masses of iron accumulation; slightly acid; clear smooth boundary.
- 2C1—32 to 35 inches; mottled yellowish brown (10YR 5/4), strong brown (7.5Y 5/6), and yellowish red (5YR 4/8) loamy fine sand; single grain; loose; slightly acid; gradual smooth boundary.
- 2C2—35 to 80 inches; mottled yellowish brown (10YR 5/4) and pale brown (10YR 6/3) loamy fine sand; single grain; loose; thin strong brown (7.5YR 5/8) horizontal bands; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches; epipedon extends into the B horizon in some pedons

Depth to strongly contrasting particle-size class: 20 to 39 inches

Particle-size control section: Average of more than 40 percent clay in the A and Bg1 horizons and average of less than 20 percent clay in the 2C horizon

Depth to carbonates: Typically more than 60 inches

Ap and A horizons:

Hue—10YR or neutral

Value—2 or 3 (3 to 5 dry)

Chroma—0 to 2

Texture—silty clay or clay

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—3 to 5 (5 to 7 dry)

Chroma—0 or 1

Texture—silty clay or clay

2Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—3 to 6

Chroma—0 to 2

Texture—silty clay loam, clay loam, sandy clay loam, sandy loam, or loam

2C horizon:

Hue—commonly 10YR or 7.5YR; less commonly 5YR, 2.5Y, or neutral

Value—4 or 5

Chroma—0 to 6

Texture—dominantly loamy fine sand, loamy sand, or fine sand; thin discontinuous bands of sandy loam, loam, silt loam, or silty clay loam occur in some pedons

Cape Series

Taxonomic Classification: Fine, smectitic, acid, mesic Vertic Endoaquepts

Typical Pedon

Cape silty clay loam; in Saline County, Illinois; in a nearly level or depressional area in a cultivated field, at an elevation of about 375 feet above mean sea level, approximately 2 miles southwest of Carrier Mills, about 1,290 feet north and 660 feet west of the center of sec. 10, T. 10 S., R. 5 E.; USGS Carrier Mills, Illinois topographic quadrangle; lat. 37 degrees 40 minutes 08 seconds N. and long. 88 degrees 38 minutes 45 seconds W.; UTM Zone 16, Easting 354838, Northing 4170366, NAD 83:

Ap—0 to 10 inches; dark gray (10YR 4/1) silty clay loam; weak medium angular blocky structure; very firm; neutral; abrupt smooth boundary.

Bg1—10 to 22 inches; dark gray (10YR 4/1) silty clay loam; moderate coarse prismatic structure parting to weak medium angular blocky; very firm; common medium distinct brown (10YR 4/3) masses of iron accumulation; common prominent threadlike iron-manganese masses; strongly acid; clear smooth boundary.

Bg2—22 to 28 inches; gray (10YR 5/1) silty clay; weak coarse prismatic structure parting to weak medium angular blocky; very firm; common medium distinct brown (10YR 4/3) masses of iron accumulation; prominent threadlike iron-manganese masses on surfaces along root channels; strongly acid; clear smooth boundary.

Bg3—28 to 35 inches; gray (10YR 5/1), dark gray (10YR 4/1), and gray (10YR 6/1) silty clay; weak coarse prismatic structure parting to weak medium and coarse angular blocky; very firm; common medium prominent dark reddish brown (5YR 3/3) masses of iron accumulation; few prominent threadlike iron-manganese masses on surfaces along root channels; strongly acid; clear smooth boundary.

Bg4—35 to 45 inches; gray (10YR 5/1) and grayish brown (10YR 5/2) silty clay; weak coarse angular blocky structure; firm; common medium distinct pale brown (10YR 6/3) and faint dark grayish brown (10YR 4/2) masses of iron accumulation; common prominent threadlike iron-manganese masses; strongly acid; gradual smooth boundary.

Cg—45 to 80 inches; gray (10YR 6/1), light gray (10YR 7/1), and grayish brown (10YR 5/2) silty clay loam; massive; firm; common medium distinct pale brown (10YR 6/3) masses of iron accumulation; common prominent threadlike iron-manganese masses on surfaces along root channels; strongly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 35 to 50 inches

Particle-size control section: Average of 40 to 55 percent clay

Ap or A horizon:

Hue—10YR or 2.5Y

Value—4 or 5 (5 or 6 dry)

Chroma—1 or 2

Texture—silty clay loam, silty clay, or clay; silt loam in the overwash phase

Bg horizon:

Hue—10YR, 2.5Y, or neutral

Value—4 to 6 (5 to 7 dry)

Chroma—0 to 2

Texture—silty clay or clay; silty clay loam in upper part of some pedons

Cg horizon:

Hue—10YR, 2.5Y, or neutral

Value—4 to 7

Chroma—0 to 2

Texture—silty clay loam, silty clay, or clay

Clarksville Series

Taxonomic Classification: Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Clarksville gravelly silt loam; in Hardin County, Illinois; in a steep or very steep wooded area in the uplands, at an elevation of about 530 feet above mean sea level, approximately 1 mile west of Hicks Dome, about 825 feet south and 550 feet west of the center of sec. 25, T. 11 S., R. 7 E.; USGS Herod, Illinois topographic quadrangle; lat. 37 degrees 31 minutes 53 seconds N. and long. 88 degrees 23 minutes 18 seconds W.; UTM Zone 16, Easting 377341, Northing 4154719, NAD 83:

- Oi—0 to 0.5 inch; very dark brown (10YR 2/2) organic and silty material; densely matted roots; strongly acid; abrupt smooth boundary.
- A—0.5 to 1 inch; very dark brown (10YR 2/2) gravelly silt loam; weak medium crumb structure; friable; 15 percent chert gravel; very strongly acid; abrupt smooth boundary.
- E1—1 to 5 inches; 60 percent mixed dark grayish brown (10YR 4/2) and 40 percent brown (10YR 5/3) gravelly silt loam; massive; friable; few fine pores; 20 percent chert gravel; very strongly acid; clear smooth boundary.
- E2—5 to 10 inches; yellowish brown (10YR 5/4) very gravelly silt loam; weak very fine subangular blocky structure in interstices between chert fragments; friable; root or worm channels coated with grayish brown (10YR 5/2) material; common fine pores; 35 percent chert gravel; very strongly acid; clear smooth boundary.
- E3—10 to 16 inches; yellowish brown (10YR 5/4) very gravelly silt loam, very pale brown (10YR 7/3) dry; weak very fine to fine subangular blocky structure in interstices between chert fragments; friable; few brown (7.5YR 4/4) coatings of silty clay on chert fragments; yellowish red (5YR 4/8) material on interior of chert fragments; 45 percent chert gravel; very strongly acid; clear wavy boundary.
- 2E/B—16 to 26 inches; yellowish brown (10YR 5/4) very gravelly silt loam, and yellowish red (5YR 4/8) gravelly silty clay loam and gravelly silty clay; light gray (10YR 7/2) and pale brown (10YR 8/2) matrix when dry; moderate fine and very fine angular blocky structure in places where rock interstices are large enough to allow structure; very firm; silty part friable when crushed; strong brown (7.5YR 5/6) and yellowish red (5YR 5/6) clay films when dry; 45 percent chert gravel; very strongly acid; gradual boundary.
- 2Bt1—26 to 36 inches; yellowish red (5YR 5/6) very gravelly silty clay and reddish brown (5YR 5/4) very gravelly silt loam, very pale brown (10YR 7/3 and 7/4, dry) in matrix; common fine distinct pinkish gray (7.5YR 6/2) mottles in interstices of fractured cherty rock; medium and strong fine and very fine angular blocky structure in interstices large enough to allow structure; very firm; many prominent dusky red (2.5YR 4/4) and dark red (2.5YR 3/6) clay films on faces of pedis; yellowish red (5YR 4/6 and 5/6, dry) clay films; 50 percent chert gravel; strongly acid; gradual smooth boundary.
- 2Bt2—36 to 80 inches; yellowish red (5YR 5/6) and strong brown (7.5YR 5/6) very gravelly silty clay in fracture planes, yellowish red (5YR 5/6) and reddish yellow (7.5YR 7/6, dry) in matrix; medium and strong fine and very fine angular blocky

structure in interstices large enough to allow structure; alternate friable to very firm layers; reddish brown (2.5YR 4/4, dry) clay films on faces of peds and chert fragments; 60 percent chert gravel and cobbles; strongly acid.

Range in Characteristics

Depth to bedrock: More than 80 inches

Depth to the top of the argillic horizon: 7 to 40 inches

Particle-size control section: Average of 18 to 35 percent clay, 5 to 20 percent sand, and 35 to 70 percent rock fragments

A horizon:

Hue—10YR

Value—2 to 6

Chroma—1 to 4

Fine-earth texture—silt loam or silt

Rock fragments—20 to 60 percent gravel and cobbles

E horizon:

Hue—10YR

Value—4 to 7

Chroma—2 to 6

Fine-earth texture—silt loam, silt, or loam

Rock fragments—35 to 60 percent gravel and cobbles

2E/B horizon:

Hue—2.5YR to 10YR

Value—4 to 6

Chroma—4 to 6

Fine-earth texture—silt loam, silty clay loam, or silty clay

Rock fragments—35 to 80 percent gravel and cobbles

2Bt horizon:

Hue—2.5YR to 10YR

Value—3 to 6

Chroma—4 to 6

Fine-earth texture—silty clay or clay

Rock fragments—35 to 80 percent gravel and cobbles

Colp Series

Taxonomic Classification: Fine, smectitic, mesic Aquertic Chromic Hapludalfs

Typical Pedon

Colp silt loam; in Monroe County, Illinois; in a cultivated field, at an elevation of about 420 feet above mean sea level, approximately 4 miles south and 2 miles east of Hecker; about 1,095 feet east and 110 feet north of the center of sec. 27, T. 3 S., R. 8 W.; USGS Red Bud, Illinois topographic quadrangle; lat. 38 degrees 14 minutes 38 seconds N. and long. 89 degrees 58 minutes 02 seconds W.; UTM Zone 16, Easting 240324, Northing 4237040, NAD 83:

Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; common very fine roots; few fine continuous tubular pores; few fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with sharp boundaries; 21 percent clay; neutral; abrupt smooth boundary.

E—8 to 12 inches; light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 8/2) dry; weak fine subangular blocky structure parting to moderate fine granular;

- friable; few very fine roots; few very fine continuous tubular pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with sharp boundaries; 19 percent clay; moderately acid; abrupt smooth boundary.
- 2Bt1—12 to 17 inches; yellowish brown (10YR 5/4) silty clay; weak fine prismatic structure parting to moderate fine angular blocky; firm; few very fine roots; common prominent very pale brown (10YR 8/2, dry) clay depletions on faces of peds; many faint brown (10YR 5/3) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with sharp boundaries; 46 percent clay; very strongly acid; clear smooth boundary.
- 2Bt2—17 to 23 inches; yellowish brown (10YR 5/4) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; very firm; few very fine roots; many faint brown (10YR 5/3) clay films on faces of peds; few fine distinct light brownish gray (10YR 6/2) iron depletions; common fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with sharp boundaries; 48 percent clay; very strongly acid; gradual smooth boundary.
- 2Bt3—23 to 30 inches; yellowish brown (10YR 5/4) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; very firm; few very fine roots; common faint brown (10YR 5/3) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with sharp boundaries; 47 percent clay; very strongly acid; gradual smooth boundary.
- 2Bt4—30 to 37 inches; yellowish brown (10YR 5/4) clay; moderate medium prismatic structure parting to moderate medium angular blocky; very firm; few very fine roots; common faint brown (10YR 5/3) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and common fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium rounded dark reddish brown (5YR 2.5/2) iron-manganese nodules with clear yellowish red (5YR 4/6) boundaries; 61 percent clay; very strongly acid; clear smooth boundary.
- 2Bt5—37 to 48 inches; brown (10YR 5/3) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; firm; few very fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; few prominent black (N 2.5/0) iron-manganese coatings lining root channels; common medium faint light brownish gray (10YR 6/2) iron depletions and many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium rounded dark reddish brown (5YR 2.5/2) iron-manganese nodules with clear yellowish red (5YR 4/6) boundaries; 37 percent clay; very strongly acid; abrupt smooth boundary.
- 2Btg1—48 to 55 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak medium prismatic structure parting to moderate medium angular blocky; friable; few very fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds and lining root channels; few prominent black (N 2.5/0) iron-manganese coatings lining root channels; common fine and medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium irregular black (5YR 2.5/1) iron-manganese nodules with clear yellowish red (5YR 4/6) boundaries on vertical faces of peds; 36 percent clay; moderately acid; abrupt smooth boundary.
- 2Btg2—55 to 70 inches; light brownish gray (2.5Y 6/2) silty clay; weak medium prismatic structure parting to moderate medium angular blocky; firm; few very fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds and

lining root channels; common fine and medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; many fine and medium irregular black (5YR 2.5/1) iron-manganese nodules with clear yellowish red (5YR 4/6) boundaries on vertical faces of peds; 43 percent clay; moderately acid; clear smooth boundary.

2BCtkg—70 to 80 inches; grayish brown (2.5Y 5/2) silty clay; weak medium prismatic structure parting to moderate fine and medium angular blocky; very firm; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; common prominent reddish brown (5YR 4/4) iron-manganese coatings lining channels and pores; few fine and medium irregular black (5YR 2.5/1) iron-manganese nodules with clear yellowish red (5YR 4/6) boundaries; common fine and medium irregular white (10YR 8/1) carbonate nodules with sharp boundaries; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: 50 to more than 80 inches

Thickness of loess or other silty material: 0 to 20 inches

Particle-size control section: Average of 35 to 50 percent clay and less than 15 percent sand; some subhorizons contain 50 to about 60 percent clay

Depth to carbonates: Typically more than 50 inches; as shallow as 42 inches in some pedons

Other characteristics: Some pedons have a thin BE or Bt horizon of silt loam or silty clay loam that formed in the upper silty material

Ap or A horizon:

Hue—10YR

Value—4 or 5; 3 in some thin A horizons

Chroma—1 to 4

Texture—silt loam; silty clay loam in some eroded pedons

E horizon (if it occurs):

Hue—10YR

Value—5 or 6 (6 to 8 dry)

Chroma—2 to 4

Texture—silt loam

2Bt horizon:

Hue—commonly 10YR and less commonly 7.5YR or 2.5Y

Value—4 to 6

Chroma—3 to 6

Texture—dominantly silty clay loam or silty clay; subhorizons of clay occur in some pedons

2Btg or 2BCg horizon (if it occurs):

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 or 2

Texture—dominantly silty clay loam or silty clay; subhorizons of clay occur in some pedons; thin strata of silt loam, loam, or fine sandy loam occur in the lower part of the horizon in other pedons

2C or 2Cg horizon (if it occurs):

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma—1 to 8

Texture—silty clay loam or silty clay

Darwin Series

Taxonomic Classification: Fine, smectitic, mesic Fluvaquentic Vertic Endoaquolls

Typical Pedon

Darwin silty clay; in Lawrence County, Illinois; in a nearly level cultivated field, at an elevation of about 433 feet above mean sea level, approximately 2.5 miles west of Russellville; 2,320 feet north and 110 feet east of the center of sec. 6, T. 4 N., R. 10 W.; USGS Russellville, Illinois topographic quadrangle; lat. 38 degrees 49 minutes 14.5 seconds N. and long. 87 degrees 33 minutes 59.5 seconds W.; UTM 16, Easting 450817, Northing 4297036, NAD 83:

- Ap—0 to 7 inches; very dark gray (10YR 3/1) silty clay, dark gray (10YR 4/1) dry; weak very fine granular structure in the upper part and moderate fine and medium angular blocky structure in the lower part; very firm; slightly acid; abrupt smooth boundary.
- A—7 to 14 inches; very dark gray (N 3/0) silty clay, dark gray (10YR 4/1) dry; weak medium prismatic structure parting to moderate medium angular blocky; firm; few fine prominent dark yellowish brown (10YR 3/4) masses of iron and manganese accumulation in the matrix; neutral; gradual smooth boundary.
- Bg1—14 to 24 inches; dark gray (5Y 4/1) silty clay; weak medium prismatic structure parting to moderate medium and coarse angular blocky; firm; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.
- Bg2—24 to 33 inches; dark gray (5Y 4/1) silty clay; weak coarse prismatic structure parting to moderate medium angular blocky; firm; common fine and medium prominent yellowish brown (10YR 5/4 and 5/6) masses of iron accumulation in the matrix; few fine dark iron and manganese concretions throughout; neutral; gradual smooth boundary.
- Bg3—33 to 46 inches; gray (5Y 5/1) silty clay; weak coarse prismatic structure parting to weak medium angular blocky; firm; few medium carbonate concretions increasing in number in the lower part of the horizon; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few dark iron and manganese concretions throughout; slightly alkaline; abrupt wavy boundary.
- BCg—46 to 56 inches; gray (5Y 5/1) silty clay loam; weak medium and coarse angular blocky structure; very firm; many fine prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; slightly alkaline; gradual smooth boundary.
- Cg—56 to 80 inches; gray (5Y 5/1) silty clay loam; massive; firm; many fine and medium prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation in the matrix; slightly alkaline.

Range in Characteristics

Depth to the base of the cambic horizon: 40 to 60 inches

Thickness of the mollic epipedon: 10 to 24 inches

Particle-size control section: Average of 45 to 60 percent clay

Series control section: Average of less than 5 percent sand

Ap or A horizon:

Hue—10YR, 2.5Y, or neutral

Value—2 or 3

Chroma—0 to 2

Texture—typically silty clay; silty clay loam or clay in some pedons

Clay content—35 to 60 percent

Reaction—slightly acid to slightly alkaline

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—3 to 6

Chroma—0 to 2

Texture—typically silty clay; some pedons contain horizons of clay

Clay content—45 to 55 percent

Reaction—slightly acid to slightly alkaline; some pedons contain carbonates in the lower part

Cg or BCg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam, silty clay, or clay

Clay content—27 to 60 percent

Reaction—neutral to moderately alkaline; some pedons contain carbonates

Drury Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Dystric Eutrudepts

Typical Pedon

Drury silt loam; in Union County, Illinois; on a rolling footslope, in a wooded field, at an elevation of about 445 feet above mean sea level, approximately 2½ miles southeast of Ware, about 1,995 feet north and 85 feet west of the center of sec. 32, T. 12 S., R. 2 W.; USGS Jonesboro, Illinois topographic quadrangle; lat. 37 degrees 26 minutes 06 seconds N. and long. 89 degrees 21 minutes 12 seconds W.; UTM Zone 16, Easting 291793, Northing 4145736, NAD 83:

A1—0 to 2 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; very friable; moderately acid; clear smooth boundary.

A2—2 to 6 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; few faint very dark grayish brown (10YR 3/2) organic films on faces of peds; moderately acid; clear smooth boundary.

Bw1—6 to 15 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; few faint very dark grayish brown (10YR 3/2) organic films on faces of peds; common vesicular pores; moderately acid; gradual smooth boundary.

Bw2—15 to 25 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine and medium subangular blocky structure; very friable; few faint dark brown (10YR 3/3) organic films on faces of peds; common vesicular pores; moderately acid; gradual smooth boundary.

Bw3—25 to 33 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; common distinct pale brown (10YR 6/3) silt coatings on faces of peds; few vesicular pores; slightly acid; gradual smooth boundary.

C1—33 to 49 inches; dark yellowish brown (10YR 4/4) and pale brown (10YR 6/3) silt loam; massive; friable; slightly acid; gradual smooth boundary.

C2—49 to 80 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; few fine distinct dark yellowish brown (10YR 4/4) and common fine faint brown (10YR 5/3) masses of iron accumulation; slightly acid.

Range in Characteristics

Depth to the base of soil development: Typically 30 to 40 inches; ranging from 26 to 45 inches

Particle-size control section: Average of 18 to 25 percent clay

Depth to a buried soil (if it occurs): More than 50 inches

Depth to carbonates: More than 40 inches

Ap or A horizon:

Hue—10YR

Value—3 or 4

Chroma—2 to 4

Texture—silt loam or silt

E horizon (if it occurs):

Hue—10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam or silt

Bw horizon:

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—3 to 6 in the upper part of horizon; 2 to 6 in the lower part

Texture—silt loam

C horizon:

Hue—10YR

Value—3 to 6

Chroma—2 to 4

Texture—silt loam, loam, or very fine sandy loam

Dupo Series

Taxonomic Classification: Coarse-silty over clayey, mixed over smectitic, superactive, nonacid, mesic Aquic Udifluvents

Typical Pedon

Dupo silt loam; in Randolph County, Illinois; on a nearly level flood plain in a cultivated field, at an elevation of about 390 feet above mean sea level, approximately 2½ miles west of Modoc; Illinois State Plane Coordinates 506,150 feet north and 526,600 feet east (Illinois West Zone); T. 5 S., R. 9 W.; USGS Prairie Du Rocher, Illinois-Missouri topographic quadrangle; lat. 38 degrees 03 minutes 20 seconds N. and long. 90 degrees 04 minutes 28 seconds W.; UTM Zone 15, Easting 756679, Northing 4216026, NAD 83:

Ap—0 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; many very fine and fine roots; few very fine continuous tubular pores; few fine rounded strong brown (7.5YR 5/6) masses of iron-manganese accumulation; slightly alkaline; abrupt smooth boundary.

C1—9 to 17 inches; brown (10YR 5/3) silt loam; massive; very friable; common very fine and fine roots; few very fine continuous tubular pores; common fine faint grayish brown (10YR 5/2) iron depletions and common fine faint yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine irregular strong brown (7.5YR 5/6) masses of iron-manganese accumulation; slightly alkaline; clear smooth boundary.

C2—17 to 25 inches; brown (10YR 5/3) silt loam; massive; very friable; common very

fine and fine roots; common very fine and fine continuous tubular pores; common very dark grayish brown (10YR 3/2) wormcasts; many medium faint grayish brown (10YR 5/2) iron depletions and many medium faint dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; few fine irregular strong brown (7.5YR 5/6) masses of iron-manganese accumulation; neutral; abrupt smooth boundary.

2Ab1—25 to 39 inches; very dark gray (10YR 3/1) silty clay; moderate medium prismatic structure parting to strong fine angular blocky; very firm; few very fine and fine roots; common fine constricted tubular pores; common distinct dark yellowish brown (10YR 4/4) clay depletions on vertical faces of prisms; common fine distinct dark yellowish brown (10YR 4/4) and common medium prominent yellowish red (5YR 4/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

2Ab2—39 to 59 inches; very dark gray (10YR 3/1) silty clay; moderate coarse prismatic structure parting to moderate medium angular blocky; very firm; few very fine and fine roots; few fine and medium constricted tubular pores; few faint dark yellowish brown (10YR 4/4) clay depletions on vertical faces of prisms; common faint very dark gray (10YR 3/1) pressure faces on faces of peds; common fine distinct dark yellowish brown (10YR 4/4) and few medium prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.

2Bgb—59 to 75 inches; dark gray (10YR 4/1) silty clay; weak coarse prismatic structure; very firm; few very fine and fine roots; common distinct dark gray (10YR 4/1) pressure faces on faces of peds; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; slightly alkaline; gradual smooth boundary.

2Csg—75 to 80 inches; gray (2.5Y 5/1) clay; massive; very firm; common shiny dark gray (2.5Y 4/1) nonintersecting slickensides; common fine medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Depth to a buried soil: 20 to 40 inches

Particle-size control section: Average of 10 to 18 percent clay in the silty alluvium, 35 to 55 percent clay in the buried horizons, and less than 10 percent sand throughout the profile

Ap or A horizon:

Hue—10YR

Value—typically 4 or 5; strata with value of 3 occur in some undisturbed pedons

Chroma—1 to 3

Texture—silt loam or silt; horizon is stratified in many undisturbed pedons

C horizon:

Hue—10YR

Value—4 to 6

Chroma—1 to 3

Texture—dominantly silt loam; horizon is stratified with thin lenses of other textures in some pedons

2Ab horizon:

Hue—10YR or neutral

Value—2 to 4

Chroma—0 to 2

Texture—silty clay, clay, or silty clay loam

2Bgb, 2Csg, or 2Cg horizon (if it occurs):

Hue—10YR or yellower hue

Value—3 to 6

Chroma—1 or 2

Texture—silty clay, clay, or silty clay loam

Elsah Series

Taxonomic Classification: Loamy-skeletal, mixed, superactive, nonacid, mesic Typic Udifluvents

Typical Pedon

Elsah silt loam; in Alexander County, Illinois; on a nearly level flood plain, in a pasture with widely scattered trees, at an elevation of about 485 feet above mean sea level, approximately 4 miles east of Thebes on the north side of Brownsville Creek, about 60 feet west and 2,025 feet north of the southeast corner of sec. 12, T. 15 S., R. 3 W.; USGS Thebes, Illinois topographic quadrangle; lat. 37 degrees 13 minutes 30 seconds N. and long. 89 degrees 22 minutes 57 seconds W.; UTM Zone 16, Easting 288615, Northing 4122505, NAD 83:

A—0 to 10 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; very friable; about 2 percent chert gravel; slightly acid; gradual wavy boundary.

Bw1—10 to 22 inches; brown (10YR 4/3) very gravelly silt loam; moderate fine subangular blocky structure; friable; about 35 percent chert gravel; slightly acid; clear wavy boundary.

Bw2—22 to 32 inches; brown (7.5YR 4/4) very gravelly loam; weak medium subangular blocky structure; very friable; about 50 percent coarse fragments of chert (mostly gravel with a few cobbles); slightly acid; gradual wavy boundary.

C—32 to 80 inches; brown (7.5YR 4/4) extremely gravelly loam; single grain; loose; about 75 percent coarse fragments of chert (mostly gravel with a few cobbles); slightly acid.

Range in Characteristics

Thickness of the solum: 16 to about 40 inches

Organic carbon content: Decreases irregularly with increasing depth

Particle-size control section: Average of 8 to 18 percent clay

Rock fragments: Dominantly angular chert pebbles or cobbles and some limestone channers; less commonly subrounded fragments

Reaction: Moderately acid to neutral throughout the profile

A horizon:

Hue—10YR or 7.5YR

Value—3 to 5 (6 dry)

Chroma—2 to 4

Texture of the fine-earth fraction—silt loam or loam

Rock fragment content—typically 0 to 20 percent; ranging to 60 percent

Bw horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture of the fine-earth fraction—loam or silt loam

Rock fragment content—5 to 50 percent, by volume, gravel and cobbles

C horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture of the fine-earth fraction—loam or silt loam; stratified sand, loamy sand, or sandy loam in some pedons

Rock fragment content—15 to 85 percent, by volume, gravel and cobbles; some strata have less than 15 percent rock fragments

Ginat Series

Taxonomic Classification: Fine-silty, mixed, active, mesic Fragic Epiaqualfs

Typical Pedon

Ginat silt loam; in Pope County, Illinois; in a cultivated field, at an elevation of about 332 feet above mean sea level, approximately 300 feet north and 120 feet east of the southwest corner of the NE1/4 SE1/4 of sec. 3, T. 14 S., R. 5 E.; USGS Reevesville, Illinois topographic quadrangle; lat. 37 degrees 19 minutes 32 seconds N. and long. 88 degrees 38 minutes 27 seconds W.; UTM Zone 16, Easting 354620, Northing 4132245, NAD 83:

Ap—0 to 6 inches; brown (10YR 5/3) silt loam, light gray (10YR 7/2) dry; moderate medium and coarse granular structure; friable; common fine and very fine black (N 2/0), strong brown (7.5YR 5/8), and dark brown (7.5YR 3/2) iron-manganese concretions; very strongly acid; clear smooth boundary.

E1—6 to 11 inches; pale brown (10YR 6/3) silt loam; weak medium platy structure; firm to friable; few fine faint light gray (10YR 7/1) iron depletions; many fine and very fine black (N 2/0), dark brown (7.5YR 3/2), and brown (7.5YR 4/4) iron-manganese concretions; vesicular pores; very strongly acid; clear smooth boundary.

E2—11 to 19 inches; light gray (10YR 7/2) silt loam; weak medium subangular blocky structure; friable; common medium distinct yellowish brown (10YR 5/4) and few fine faint pale brown (10YR 6/3) masses of iron accumulation; many fine and very fine black (N 2/0), strong brown (7.5YR 5/8), and dark brown (7.5YR 3/2) iron-manganese concretions; vesicular pores; very strongly acid; clear smooth boundary.

BEg—19 to 24 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium subangular blocky structure; friable to firm; few fine prominent yellowish brown (10YR 5/8) and few fine faint brown (10YR 5/3) masses of iron accumulation; many fine black (N 2/0) and strong brown (7.5YR 5/8) iron-manganese concretions; vesicular pores; very strongly acid; clear smooth boundary.

Btg—24 to 34 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few faint grayish brown (2.5Y 5/2) clay films on faces of peds; common fine faint light gray (2.5Y 7/2) iron depletions; few fine yellowish red (5YR 5/6) and many fine black (N 2/0), brown (7.5YR 4/4), and strong brown (7.5YR 5/8) iron-manganese concretions; very strongly acid; clear smooth boundary.

Btxg1—34 to 43 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; very firm; few faint grayish brown (2.5Y 5/2) clay films and few faint light brownish gray (10YR 6/2) silt coats on faces of peds; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; common fine black (N 2/0) and strong

brown (7.5YR 5/6) iron-manganese concretions; brittle; very strongly acid; clear smooth boundary.

Btxg2—43 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate fine subangular blocky structure; very firm; few faint grayish brown (2.5Y 5/2) clay films on faces of peds; common fine prominent light olive brown (2.5Y 5/6) and common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; few fine faint light gray (10YR 7/2) iron depletions; brittle; very strongly acid; clear smooth boundary.

B'tg—49 to 55 inches; grayish brown (10YR 5/2) silty clay loam; weak fine subangular blocky structure; firm; few faint grayish brown (10YR 5/2) clay films on faces of peds; common fine faint light gray (10YR 7/2) iron depletions and few medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; few fine black (N 2/0) iron-manganese concretions; very strongly acid; clear smooth boundary.

2Bt1—55 to 65 inches; brown (10YR 4/4) silty clay loam; weak coarse subangular blocky structure; firm; few prominent gray (10YR 6/1) and brown (7.5YR 5/2) clay films on faces of peds; many fine distinct and common medium distinct grayish brown (10YR 5/2) iron depletions; few fine distinct black (10YR 2/1) iron-manganese films on ped surfaces; very strongly acid; clear smooth boundary.

2Bt2—65 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; weak coarse subangular blocky structure; friable; few distinct gray (10YR 6/1) clay films in root and worm channels and pores; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) iron depletions; few very fine distinct black (10YR 2/1) masses of iron-manganese; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: More than 60 inches

Ap or A horizon:

Hue—10YR

Value—4 or 5

Chroma—1 to 3

Texture—silt loam

Reaction—typically strongly acid or very strongly acid; ranging to neutral in limed areas

E horizon:

Hue—10YR

Value—5 to 7

Chroma—1 to 3

Texture—silt loam

Reaction—strongly acid or very strongly acid; ranging to neutral in limed areas

BEg and Btg horizons:

Hue—10YR or 2.5Y

Value—5 to 7

Chroma—1 or 2

Texture—silt loam or silty clay loam

Reaction—very strongly acid to moderately acid

Btxg or B'tg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—5 to 7

Chroma—1 or 2

Texture—silt loam or silty clay loam

Reaction—very strongly acid or strongly acid

2Bt or 2Btg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 7

Chroma—1 to 4

Texture—commonly silt loam or silty clay loam; less commonly, silty clay, clay loam, or loam

Clay content—21 to 42 percent

Sand content—5 to 25 percent

Rock fragments—0 to 5 percent pebbles

Reaction—strongly acid to slightly alkaline

The Ginat soils in this survey area are considered taxadjuncts to the series because they have fragic soil properties in the lower part of the control section. This difference, however, does not significantly affect the use and management of the soils. The taxadjunct classifies as fine-silty, mixed, active, mesic Fragic Epiaqualfs.

Gorham Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls

Typical Pedon

Gorham silty clay loam; in Jackson County, Illinois; on a nearly level flood plain, in a cultivated field, at an elevation of about 360 feet above mean sea level, approximately 1 mile northwest of Gorham, about 1,400 feet east and 1,800 feet north of the southwest corner of sec. 24, T. 9 S., R. 4 W.; USGS Altenburg, Missouri-Illinois topographic quadrangle; lat. 37 degrees 43 minutes 37 seconds N. and long. 89 degrees 30 minutes 12 seconds W.; UTM Zone 16, Easting 279375, Northing 4178476, NAD 83:

Ap—0 to 7 inches; very dark gray (10YR 3/1) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine angular and medium angular blocky structure parting to weak fine granular; firm; common very fine roots; neutral; abrupt smooth boundary.

A—7 to 14 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine angular and medium angular blocky structure; very firm; common very fine roots; common faint black (10YR 2/1) organic coatings on faces of peds; few fine irregular brown (7.5YR 4/4) masses of iron-manganese accumulation with sharp boundaries; neutral; clear smooth boundary.

Btg1—14 to 26 inches; dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure parting to moderate fine angular and medium angular blocky; very firm; common very fine roots; common faint very dark gray (10YR 3/1) organo-clay films on faces of peds; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; common fine irregular brown (7.5YR 4/4) masses of iron-manganese accumulation with clear boundaries; neutral; gradual smooth boundary.

Btg2—26 to 36 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; very firm; few very fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; many fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; common fine irregular brown (7.5YR 4/4) masses of iron-manganese accumulation with clear boundaries; about 12 percent sand; slightly acid; clear smooth boundary.

2Bt1—36 to 47 inches; olive brown (2.5Y 4/3) clay loam; moderate medium prismatic

structure parting to moderate fine angular and medium angular blocky; firm; few very fine roots; few very fine continuous tubular pores; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and few prominent very dark gray (10YR 3/1) organo-clay films on vertical faces of peds and lining root channels; many medium faint grayish brown (2.5Y 5/2) iron depletions in the matrix; neutral; clear smooth boundary.

2Bt2—47 to 54 inches; olive brown (2.5Y 4/3) loam; weak medium angular blocky structure; friable; few very fine roots; few very fine continuous tubular pores; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and lining root channels; common fine faint dark grayish brown (2.5Y 4/2) iron depletions and few medium faint dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

2BCt—54 to 62 inches; brown (10YR 4/3) fine sandy loam; weak medium and coarse angular blocky structure; very friable; few very fine roots; common very fine and fine continuous tubular pores; few distinct very dark grayish brown (10YR 3/2) organo-clay films on vertical faces of peds and lining root channels and pores; common medium faint dark grayish brown (2.5Y 4/2) iron depletions in the matrix; few shiny mica flecks; slightly acid; clear smooth boundary.

2C1—62 to 78 inches; brown (10YR 4/3) stratified fine sandy loam and loamy fine sand; massive; very friable; few very fine and fine continuous tubular pores; common fine faint grayish brown (2.5Y 5/2) iron depletions in the matrix; few shiny mica flecks; slightly acid; abrupt smooth boundary.

2C2—78 to 90 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 36 to 60 inches

Thickness of the mollic epipedon: 10 to 24 inches; epipedon extends into the upper part of the B horizon in some pedons

Depth to horizons with more than 15 percent sand: 26 to 40 inches

Depth to carbonates: More than 40 inches

Ap and A horizons:

Hue—10YR

Value—2 or 3 (4 or 5 dry)

Chroma—1 or 2

Texture—commonly silty clay loam; less commonly silt loam or silty clay

Btg and Bg horizons that formed in silty alluvium:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—3 to 5

Chroma—0 to 2

Texture—silty clay loam or silty clay

Clay content—average of 27 to 35 percent; ranging to 42 percent in individual horizons

Sand content—less than 15 percent

2Bt, 2Btg, and 2BC horizons that formed in loamy or sandy alluvium:

Hue—7.5YR, 10YR, 2.5Y, or 5Y

Value—3 to 5

Chroma—1 to 4

Texture—sandy clay loam, clay loam, loam, sandy loam, or loamy sand or the fine or very fine analogs of these textures

Clay content—average of 18 to 27 percent; ranging from 8 to 32 percent in individual horizons

Sand content—average of 30 to 75 percent; ranging from 30 to 85 percent in individual horizons

2C, 2BCKg, or 2Cg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—3 to 6

Chroma—2 to 6

Texture—commonly sand or loamy sand; less commonly sandy loam or the fine and very fine analogs of these textures; thin strata of other textures occur in some pedons

Clay content—average of 5 to 15 percent

Sand content—60 to 95 percent

Goss Series

Taxonomic Classification: Clayey-skeletal, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Goss gravelly silt loam; in Union County, Illinois; in a steep or very steep wooded area on uplands, at an elevation of about 675 feet above mean sea level, approximately $\frac{1}{4}$ mile northeast of Government Rock, about 2,800 feet north and 400 feet east of the southwest corner of sec. 22, T. 11 S., R. 3 W.; USGS Wolf Lake, Illinois topographic quadrangle; lat. 37 degrees 32 minutes 53 seconds N. and long. 89 degrees 26 minutes 02 seconds W.; UTM Zone 16, Easting 284979, Northing 4158473, NAD 83:

Oi—0 to 0.5 inch; partially decomposed organic matter on the surface; abrupt smooth boundary.

A—0.5 inch to 2 inches; brown (10YR 5/3, crushed) gravelly silt loam; weak fine granular structure; common very fine to medium roots throughout; 30 percent angular limestone-cherty gravel; moderately acid; abrupt smooth boundary.

E—2 to 7 inches; brown (10YR 5/3) gravelly silt loam; moderate fine and medium subangular blocky structure; common very fine to medium roots throughout; 30 percent angular limestone-cherty gravel; very strongly acid; clear smooth boundary.

2Bw—7 to 16 inches; brown (10YR 5/3) very gravelly clay loam; moderate fine and medium subangular blocky structure; common very fine to medium roots throughout; 50 percent angular limestone-cherty gravel; very strongly acid; clear smooth boundary.

2Bt1—16 to 22 inches; brown (7.5YR 5/4) very gravelly clay loam; strong medium subangular blocky structure; common very fine to medium roots throughout; few faint strong brown (7.5YR 5/6) clay films on vertical and horizontal faces of ped; 40 percent angular limestone-cherty gravel and 20 percent angular limestone-cherty cobbles; very strongly acid; clear smooth boundary.

2Bt2—22 to 34 inches; strong brown (7.5YR 5/6, broken face) very cobbly clay; strong fine and medium subangular blocky structure; common very fine to medium roots throughout; few prominent reddish brown (5YR 4/4) and few prominent yellowish red (5YR 4/6) clay films on faces of peds and in pores; 45 percent angular limestone-cherty cobbles and 15 percent angular limestone-cherty gravel; very strongly acid; clear smooth boundary.

2Bt3—34 to 39 inches; brown (7.5YR 5/4) very cobbly clay; strong fine and medium subangular blocky structure parting to strong fine angular blocky; common very fine to medium roots throughout; many prominent yellowish red (5YR 5/6) clay films on faces of peds and in pores; 45 percent angular limestone-cherty cobbles and 15 percent angular limestone-cherty gravel; very strongly acid; clear smooth boundary.

2Bt4—39 to 80 inches; strong brown (7.5YR 5/6) extremely cobbly clay; strong fine and medium subangular blocky structure parting to strong fine angular blocky; common very fine to medium roots throughout; common prominent yellowish red (5YR 4/6) clay films on faces of peds and in pores; 60 percent angular limestone-cherty cobbles and 20 percent angular limestone-cherty gravel; very strongly acid.

Range in Characteristics

Depth to bedrock: More than 80 inches

A horizon:

Hue—10YR or 7.5YR

Value—2 to 5 (5 or 6 dry)

Chroma—2 to 4

Fine-earth texture—silt loam or loam

Rock fragment content—5 to 75 percent gravel and 0 to 20 percent cobbles

E horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 or 4

Fine-earth texture—silt loam, loam, or silty clay loam

Rock fragment content—5 to 75 percent gravel and 0 to 15 percent cobbles

Bw, 2Bw, and BE horizons (if they occur):

Hue—10YR to 5YR

Value—4 to 6

Chroma—3 to 8

Fine-earth texture—silt loam, loam, clay loam, or silty clay loam

Rock fragment content—5 to 75 percent gravel and 0 to 25 percent cobbles

2Bt horizon:

Hue—10R to 10YR

Value—3 to 6

Chroma—3 to 8

Fine-earth texture—silty clay loam, silty clay, or clay

Rock fragment content—15 to 75 percent gravel, 0 to 25 percent cobbles, and 0 to 10 percent stones

Other characteristics—the dominant matrix color in the lower part of the horizon to a depth of 60 inches has hue of 7.5YR or redder and chroma of 6 to 8

3Bt, 2C, and 3C horizons (if they occur):

Color—variable

Texture—variable

Hatfield Series

Taxonomic Classification: Fine-silty, mixed, active, mesic Aeric Fragic Epiaqualfs

Typical Pedon

Hatfield silt loam; in Massac County, Illinois; in a nearly level, brushy wildlife area on the east side of Mermet Lake, at an elevation of about 430 feet above mean sea level, approximately 235 feet along the access lane southwest of the gravel road, 15 feet southeast of the lane in the SE1/4 SW1/4 NW1/4 of sec. 36, T. 14 S., R. 3 E.; USGS Mermet, Illinois topographic quadrangle; lat. 37 degrees 15 minutes 17 seconds N. and long. 88 degrees 50 minutes 14 seconds W.; UTM Zone 16, Easting 337069, Northing 4124701, NAD 83:

- Ap—0 to 7 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry, dark brown (10YR 4/3) crushed; moderate medium granular structure; friable; strongly acid; abrupt smooth boundary.
- E—7 to 14 inches; yellowish brown (10YR 5/4) silt loam; weak very thick platy structure parting to weak coarse granular; friable; many medium distinct light gray (10YR 7/2) and few fine distinct brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common very fine black (N 2/0) and very dark grayish brown (10YR 3/2) iron-manganese concretions; very strongly acid; clear smooth boundary.
- Btg1—14 to 25 inches; light brownish gray (10YR 6/2) silty clay loam: moderate medium prismatic structure parting to moderate medium subangular blocky and weak fine angular blocky; very firm; many faint brown (10YR 5/3) clay films on faces of peds; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common very fine dark brown (7.5YR 3/2) and strong brown (7.5YR 5/6) iron-manganese concretions; very strongly acid; clear smooth boundary.
- Btg2—25 to 36 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky and moderate fine angular blocky; very firm; common faint brown (10YR 5/3) clay films on faces of peds; many very fine faint light gray (10YR 7/2) iron depletions and many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine black (N 2/0), dark brown (7.5YR 3/2), and strong brown (7.5YR 5/6) iron-manganese concretions; very strongly acid; clear smooth boundary.
- Btx—36 to 45 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium subangular blocky structure; firm; few faint light yellowish brown (10YR 6/4) clay films on faces of peds; common fine distinct light gray (10YR 7/2) and light brownish gray (10YR 6/2) iron depletions; many fine dark brown (7.5YR 3/2) and strong brown (7.5YR 5/6) iron concretions; slightly brittle; very strongly acid; gradual smooth boundary.
- BC1—45 to 59 inches; brown (7.5YR 4/4) silt loam; weak coarse subangular blocky structure; firm to friable; common fine and medium distinct light brownish gray (10YR 6/2) and pale brown (10YR 6/3) iron depletions; common fine dark brown (7.5YR 3/2) and black (N 2/0) iron-manganese concretions; slightly acid; gradual wavy boundary.
- BC2—59 to 80 inches; dark yellowish brown (10YR 4/4) silt loam containing silty clay loam lenses; weak coarse subangular blocky structure; friable; common fine distinct yellowish brown (10YR 5/6) iron accumulations; common very fine dark brown (7.5YR 3/2) iron-manganese concretions; moderately acid.

Range in Characteristics

Ap or A horizon:

Hue—10YR

Value—4 or 5

Chroma—2 to 4

Texture—silt loam

Reaction—strongly acid to neutral

E horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—2 to 4

Texture—silt loam

Reaction—strongly acid to neutral

Bt horizon:

Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—strongly acid or moderately acid

Btg horizon:

Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid

Btx horizon:

Hue—10YR or 7.5YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam, silty clay loam, or loam
Reaction—very strongly acid or strongly acid

BC horizon:

Hue—10YR or 7.5YR
Value—4 or 5
Chroma—2 to 6
Texture—horizon is silt loam, silty clay loam, clay loam, or loam or is stratified with these textures
Reaction—strongly acid to slightly alkaline

Haymond Series

Taxonomic Classification: Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Haymond silt loam; in Union County, Illinois; in a nearly level field, at an elevation of about 360 feet above mean sea level, approximately 4 miles northwest of Jonesboro, about 1,650 feet south and 530 feet east of the northwest corner of sec. 21, T. 12 S., R. 2 W.; USGS Jonesboro, Illinois topographic quadrangle; lat. 37 degrees 27 minutes 45 seconds N. and long. 89 degrees 20 minutes 19 seconds W.; UTM Zone 16, Easting 293167, Northing 4148751, NAD 83:

- Ap—0 to 10 inches; dark grayish brown (10YR 4/3) silt loam, light brownish gray (10YR 6/2) dry; weak medium granular structure; friable; moderately acid; gradual smooth boundary.
- A—10 to 20 inches; brown (10YR 4/3) silt loam; weak medium granular structure; very friable; moderately acid; gradual smooth boundary.
- Bw1—20 to 42 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; moderately acid; gradual smooth boundary.
- Bw2—42 to 60 inches; pale brown (10YR 5/4) silt loam that has pockets of pale brown (10YR 6/3) material; weak fine subangular blocky structure; friable; moderately acid; gradual smooth boundary.
- C—60 to 80 inches; pale brown (10YR 5/3) silt loam; massive; friable; moderately acid.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 60 inches

Other characteristics: Loamy strata that may contain pebbles or flagstones occur below a depth of 40 inches

Ap or A horizon:

Hue—10YR

Value—4 or 5 (6 or 7 dry)

Chroma—2 to 4

Texture—silt loam or silt

Bw horizon:

Hue—10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam

C horizon:

Hue—10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam, fine sandy loam, sandy loam, or loam

Hosmer Series

Taxonomic Classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Hosmer silt loam; in Union County, Illinois; in a nearly level to rolling open area, at an elevation of about 790 feet above mean sea level, approximately 3¼ miles northwest of Lick Creek, about 1,200 feet north and 2,225 feet east of the southwest corner of sec. 16, T. 11 S., R. 1 E.; USGS Lick Creek, Illinois topographic quadrangle; lat. 37 degrees 33 minutes 35 seconds N. and long. 89 degrees 06 minutes 32 seconds W.; UTM Zone 16, Easting 313716, Northing 4159068, NAD 83:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam; moderate thin platy structure parting to weak fine granular; few weak very fine subangular blocky peds; friable; common krotovinas; many roots; neutral; abrupt smooth boundary.

Bt1—7 to 18 inches; brown (10YR 5/3) silty clay loam; moderate fine and medium subangular blocky structure; firm; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few krotovinas; common vesicular pores; common fine dark concretions; strongly acid; gradual smooth boundary.

Bt2—18 to 25 inches; yellowish brown (10YR 5/4) silt loam; moderate fine and medium subangular blocky structure; firm; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; few fine distinct light brownish gray (10YR 6/2) iron depletions; few fine masses of iron and manganese accumulation; strongly acid; abrupt smooth boundary.

B/E—25 to 28 inches; yellowish brown (10YR 5/6) silt loam (B part); fine and medium moderate subangular blocky structure; firm; thin to thick clay depletions of light brownish gray (10YR 6/2) silt (E part); common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine masses of iron and manganese concretions; strongly acid; abrupt smooth boundary.

Btx1—28 to 35 inches; yellowish brown (10YR 5/6), dark yellowish brown (10YR 4/4),

and light brownish gray (2.5Y 6/2) silty clay loam; moderate very coarse and medium prismatic structure; very firm; many prominent grayish brown (2.5Y 5/2) clay films on all faces of peds; many distinct light brownish gray (2.5Y 6/2) clay depletions on faces of peds; common masses of iron and manganese accumulation and stains; brittle; strongly acid; gradual smooth boundary.

Btx2—35 to 55 inches; yellowish brown (10YR 5/6), dark yellowish brown (10YR 4/4), and light brownish gray (2.5Y 6/2) silty clay loam; moderate very coarse and medium prismatic structure; very firm; many distinct grayish brown (2.5Y 5/2) and brown (10YR 5/3) clay films on vertical and horizontal faces of peds; few iron and manganese stains; brittle; strongly acid; gradual smooth boundary.

Btx3—55 to 67 inches; yellowish brown (10YR 5/4) silt loam; weak very coarse prismatic structure; very firm; few distinct grayish brown (2.5Y 5/2) clay films on faces of peds; many coarse distinct light brownish gray (2.5Y 6/2) iron depletions; common iron and manganese stains on vertical faces of peds; brittle; moderately acid; gradual smooth boundary.

Btx4—67 to 80 inches; yellowish brown (10YR 5/4) silt loam; weak very coarse prismatic structure and massive; firm; common medium prominent light olive gray (5Y 6/2) iron depletions; iron and manganese stains in some vertical cracks and in old root channels; brittle; moderately acid.

Range in Characteristics

Thickness of loess: 7 to more than 12 feet

Particle-size control section: Average of 16 to 33 percent clay and 2 to 10 percent sand

Depth to the base of the argillic horizon: 50 to more than 80 inches

Depth to the fragipan: 20 to 36 inches

Ap horizon:

Hue—10YR

Value—4 or 5 (6 or 7 dry)

Chroma—2 to 4

Texture—typically silt loam; silty clay loam in some severely eroded pedons

E horizon (if it occurs):

Hue—10YR

Value—4 or 5 (6 or 7 dry)

Chroma—2 to 6

Texture—silt loam

Bt horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—3 to 6

Texture—silt loam or silty clay loam

B/E horizon:

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—2 to 6

Texture—silt loam in B part; silt in E part

Btx horizon:

Hue—10YR, 7.5YR, or 2.5Y

Value—4 to 6

Chroma—2 to 6

Texture—silt loam or silty clay loam

Hurst Series

Taxonomic Classification: Fine, smectitic, mesic Aeric Chromic Vertic Epiaqualfs

Typical Pedon

Hurst silt loam; in Williamson County, Illinois; in a nearly level cultivated field at an elevation of about 385 feet above mean sea level, approximately 3 miles east of Hurst, about 1,490 feet north and 1,200 feet west of the southeast corner of sec. 10, T. 8 S., R. 1 E.; USGS Herrin, Illinois topographic quadrangle; lat. 37 degrees 50 minutes 15 seconds N. and long. 89 degrees 04 minutes 48 seconds W.; UTM Zone 16, Easting 316969, Northing 4189824, NAD 83:

- Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak medium granular structure; friable; many very fine roots; common fine and medium rounded black (7.5YR 2.5/1) iron-manganese nodules with sharp boundaries; about 21 percent clay; slightly acid; abrupt smooth boundary.
- E—7 to 12 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; moderate medium platy structure parting to weak fine subangular blocky; friable; common very fine roots; many fine faint light brownish gray (10YR 6/2) iron depletions and common medium faint yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common fine and medium rounded black (7.5YR 2.5/1) iron-manganese nodules with sharp boundaries; about 22 percent clay; strongly acid; clear smooth boundary.
- Bt1—12 to 18 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; many prominent very pale brown (10YR 8/2) clay depletions on faces of peds; many fine and medium distinct light brownish gray (10YR 6/2) iron depletions and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine rounded very dark brown (7.5YR 2.5/2) iron-manganese nodules with clear strong brown (7.5YR 4/6) boundaries; about 30 percent clay; very strongly acid; clear smooth boundary.
- 2Bt2—18 to 28 inches; brown (10YR 5/3) silty clay; weak fine prismatic structure parting to weak medium angular blocky; very firm; common very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; many fine faint grayish brown (10YR 5/2) iron depletions and common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine irregular strong brown (7.5YR 4/6) masses iron-manganese accumulation with clear boundaries; about 43 percent clay; very strongly acid; gradual smooth boundary.
- 2Btg1—28 to 40 inches; grayish brown (2.5Y 5/2) silty clay loam; weak fine prismatic structure parting to weak medium angular blocky; very firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds and few prominent brown (10YR 4/3) clay films lining large channels; few fine and medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine irregular strong brown (7.5YR 4/6) masses iron-manganese accumulation with clear boundaries; about 38 percent clay; very strongly acid; clear smooth boundary.
- 2Btg2—40 to 53 inches; grayish brown (2.5Y 5/2) silty clay; weak medium prismatic structure parting to weak medium angular blocky; very firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common prominent black (N 2.5/0) iron-manganese coatings on faces of peds and lining large channels; few fine prominent yellowish brown (10YR 5/6) and common fine distinct dark brown (10YR 3/3) masses of iron accumulation in the matrix; about 46 percent clay; moderately acid; clear smooth boundary.

- 2Btg3—53 to 62 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to weak coarse angular blocky; firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many coarse irregular black (7.5YR 2.5/1) masses of iron-manganese accumulation with clear strong brown (7.5YR 5/6) boundaries; about 37 percent clay; slightly effervescent; slightly alkaline; clear smooth boundary.
- 2BCkg—62 to 76 inches; olive gray (5Y 4/2) silty clay; weak medium prismatic structure parting to moderate medium angular blocky; very firm; few very fine roots; common distinct olive gray (5Y 4/2) pressure faces on faces of peds; common distinct very dark brown (7.5YR 2.5/3) iron-manganese coatings on ped faces and lining large channels; few fine prominent yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine irregular black (7.5YR 2.5/1) and strong brown (7.5YR 5/6) masses of iron-manganese accumulation with diffuse boundaries; common fine and medium irregular white (10YR 8/1, dry) carbonate concretions; about 45 percent clay; strongly effervescent; slightly alkaline; clear smooth boundary.
- 2Cg—76 to 80 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; firm; few distinct dark grayish brown (10YR 4/2) clay films lining vertical channels; common medium prominent strong brown (7.5YR 4/6) masses of iron accumulation along vertical channels; few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common fine irregular very dark brown (7.5YR 2.5/2) masses of iron-manganese accumulation with diffuse strong brown (7.5YR 5/6) boundaries; about 33 percent clay; slightly alkaline.

Range in Characteristics

Depth to the base of the argillic horizon: 44 to more than 80 inches

Thickness of loess or other silty material: 0 to 24 inches

Depth to carbonates: More than 40 inches

Other characteristics: Some pedons, especially those having a loess cap that is nearly 24 inches thick, have a BE or Bt horizon

Ap or A horizon:

Hue—10YR

Value—4 or 5 (6 or 7 dry)

Chroma—2 or 3

Texture—silt loam or less commonly silty clay loam

E horizon (if it occurs):

Hue—10YR

Value—5 or 6 (6 to 8 dry)

Chroma—2 or 3

Texture—silt loam or less commonly silty clay loam

2Bt and 2Btg horizons:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 4

Texture—silty clay loam, silty clay, or clay

2C, 2BCkg, or 2BCg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 4

Texture—horizon is silty clay loam or silty clay and is stratified in some pedons

Jacob Series

Taxonomic Classification: Very fine, smectitic, acid, mesic Vertic Endoaquepts

Typical Pedon

Jacob silty clay; in Jackson County, Illinois; in a nearly level wooded area, at an elevation of about 350 feet above mean sea level, about 4 miles east of Grand Tower, approximately 50 feet north and 1,600 feet east of the southwest corner of sec. 22, T. 10 S., R. 3 W.; USGS Gorham, Illinois topographic quadrangle; lat. 37 degrees 37 minutes 47 seconds N. and long. 89 degrees 25 minutes 47 seconds W.; UTM Zone 16, Easting 285575, Northing 4167521, NAD 83:

- A—0 to 4 inches; dark gray (10YR 4/1) silty clay; moderate medium granular structure; very firm; common fine faint gray (10YR 5/1) iron depletions; slightly acid; clear wavy boundary.
- Bg1—4 to 16 inches; gray (10YR 5/1) clay; weak fine angular blocky structure; very firm; very plastic; few fine prominent olive brown (2.5Y 4/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.
- Bg2—16 to 34 inches; gray (5Y 5/1) clay; weak fine angular blocky structure; very firm; very plastic; common fine prominent light olive brown (2.5Y 5/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.
- Bg3—34 to 50 inches; olive gray (5Y 5/2) clay; weak fine angular blocky structure in the upper part and weak coarse prismatic structure in the lower part; very plastic; very strongly acid; gradual wavy boundary.
- Bssg—50 to 80 inches; grayish brown (2.5Y 5/2) clay; weak coarse prismatic structure; very firm; dark grayish brown (2.5Y 4/2) coatings on pressure faces; many fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation; common very dark brown (10YR 2/2) iron and manganese oxide accumulations and nodules along slickensides; slightly acid.

Range in Characteristics

Depth to the base of soil development: 40 to more than 60 inches

A or Ap horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—3 to 5 in the A horizon; in cultivated areas the Ap horizon typically has value of 4 to 6

Chroma—0 to 2 in the A horizon; 1 or 2 in the Ap horizon

Texture—silty clay or clay

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—5 to 7

Chroma—0 to 2

Texture—clay or silty clay

Bssg, BCg, and Cg horizons:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—5 to 7

Chroma—0 to 2

Texture—clay or silty clay

Karnak Series

Taxonomic Classification: Fine, smectitic, nonacid, mesic Vertic Endoaquepts

Typical Pedon

Karnak silty clay; in Massac County, Illinois; in a nearly level cultivated field, at an elevation of about 350 feet above mean sea level, approximately 3 miles east of Karnak, about 230 feet north and 2,800 feet west of the southeast corner of sec. 18, T. 14 S., R. 3 E.; USGS Karnak, Illinois topographic quadrangle; lat. 37 degrees 17 minutes 28 seconds N. and long. 88 degrees 55 minutes 20 seconds W.; UTM Zone 16, Easting 329612, Northing 4128909, NAD 83:

- Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) silty clay, gray (10YR 6/1) and light brownish gray (10YR 6/2) dry; weak fine granular structure; firm; slightly acid; abrupt smooth boundary.
- Bg1—5 to 12 inches; dark gray (5Y 4/1) silty clay; weak medium and fine subangular blocky structure; firm; few faint dark gray (5Y 4/1) pressure faces on faces of peds; few fine distinct olive (5Y 5/4) masses of iron accumulation; few prominent yellowish brown (10YR 5/6 and 5/8) iron-manganese stains on surfaces in root channels; slightly acid; clear smooth boundary.
- Bg2—12 to 20 inches; dark gray (5Y 4/1) silty clay; weak very fine and fine prismatic structure parting to weak medium and fine subangular blocky; firm; few faint dark gray (5Y 4/1) pressure faces on faces of peds; few faint dark gray (5Y 4/1) clay films on surfaces in root channels; common fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation; common fine black (N 2/0) and yellowish brown (10YR 5/8) concretions of iron-manganese accumulation; slightly acid; clear smooth boundary.
- Bg3—20 to 33 inches; dark gray (5Y 4/1) silty clay; moderate medium prismatic structure parting to weak very fine angular blocky; firm; few distinct gray (N 5/0) clay films on surfaces in root channels; common fine prominent light olive brown (2.5Y 5/6) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; common fine yellowish brown (10YR 5/8) concretions of iron-manganese accumulation; slightly acid; clear smooth boundary.
- Bg4—33 to 50 inches; dark gray (N 4/0) silty clay; weak fine prismatic structure parting to weak fine subangular blocky; firm; few distinct gray (N 5/0) pressure faces on faces of peds; few fine prominent light olive brown (2.5Y 5/6) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; slightly acid; clear smooth boundary.
- Cg—50 to 80 inches; gray (5Y 5/1) silty clay loam; massive; firm; many fine prominent yellowish brown (10YR 5/6 and 5/8) and common fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation; few fine faint light gray (5Y 7/1) iron depletions; slightly alkaline.

Range in Characteristics

Depth to the base of the cambic horizon: Typically 45 to 55 inches; ranging from 30 to 60 inches

Particle-size control section: Average of 40 to 60 percent clay

A or Ap horizon:

Hue—10YR

Value—3 to 6 (4 to 6 dry)

Chroma—1 to 3

Texture—silty clay, clay, or silty clay loam; silt loam in overwash phases

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 7

Chroma—0 to 2

Texture—clay or silty clay

BCg and Cg horizons:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 7

Chroma—0 to 2

Texture—silty clay or silty clay loam; some pedons have strata with more sand and less clay

Lamont Series

Taxonomic Classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Lamont fine sandy loam; in Massac County, Illinois; on a moderately steep slope in a cultivated field, at an elevation of about 350 feet above mean sea level, approximately 140 feet west of a north-south fence, 165 feet north of a east-west fence in the NE1/4 NE1/4 SW1/4 SW1/4 of sec. 19, T. 14 S., R. 4 E.; USGS Mermet, Illinois topographic quadrangle; lat. 37 degrees 17 minutes 01 second N. and long. 88 degrees 48 minutes 59 seconds W.; UTM Zone 16, Easting 338972, Northing 4127875, NAD 83:

Ap—0 to 6 inches; brown (10YR 4/3) fine sandy loam; weak very fine granular structure; friable; neutral; clear smooth boundary.

E—6 to 11 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak very coarse platy structure; friable; slightly acid; clear smooth boundary.

BE—11 to 17 inches; 80 percent dark yellowish brown (10YR 4/4) and 20 percent yellowish brown (10YR 5/6) fine sandy loam; weak medium prismatic structure; friable; few faint brown (7.5YR 4/4) coatings on peds and in root and worm channels; few fine and very fine pores; moderately acid; clear smooth boundary.

Bt—17 to 27 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak coarse prismatic structure; friable; common faint brown (7.5YR 4/4) clay films on faces of peds; moderately acid; abrupt smooth boundary.

C—27 to 80 inches; strong brown (7.5YR 5/6) loamy fine sand; single grain; very friable; strongly acid.

Range in Characteristics

Depth to carbonates: More than 60 inches

Content of clay in the particle-size control section: 10 to 15 percent

Content of sand in the particle-size control section: 60 to 80 percent

Rock fragment content: 0 percent

A or Ap horizon:

Hue—10YR

Value—3 in uneroded areas; 3 or 4 in cultivated or eroded areas

Chroma—1 or 2 in uneroded areas; 2 or 3 in cultivated or eroded areas

Texture—fine sandy loam

Clay content—5 to 20 percent

Sand content—50 to 80 percent

Reaction—strongly acid to neutral

E horizon:

Hue—10YR

Value—4 or 5

Chroma—2 or 3

Texture—fine sandy loam, sandy loam, or loamy fine sand

Clay content—5 to 20 percent

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Sand content—50 to 80 percent
Reaction—strongly acid to neutral

BE horizon (if it occurs):

Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sandy loam, sandy loam, or loamy fine sand
Clay content—5 to 20 percent
Sand content—50 to 80 percent
Reaction—strongly acid to neutral

Bt horizon:

Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sandy loam, sandy loam, loam, or sandy clay loam
Clay content—5 to 24 percent
Sand content—35 to 80 percent
Reaction—strongly acid to slightly acid

BC or C horizon (if it occurs):

Hue—10YR or 7.5YR
Value—3 to 6
Chroma—3 to 6
Texture—fine sandy loam, sandy loam, loamy fine sand, loamy sand, fine sand, or sand
Clay content—2 to 24 percent
Sand content—35 to 95 percent
Reaction—strongly acid to neutral

Medway Series

Taxonomic Classification: Fine-loamy, mixed, superactive, mesic Fluvaquentic
Hapludolls

Typical Pedon

Medway silty clay loam; in Union County, Illinois; in a nearly level to undulating area in a cultivated field, at an elevation of about 340 feet above mean sea level, approximately 4½ miles northwest of Ware, about 740 feet south and 320 feet west of the northeast corner of sec. 8, T. 12 S., R. 3 W.; USGS Ware, Illinois-Missouri topographic quadrangle; lat. 37 degrees 29 minutes 39 seconds N. and long. 89 degrees 27 minutes 17 seconds W.; UTM Zone 16, Easting 282998, Northing 4152520, NAD 83:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; weak coarse subangular blocky and weak thin platy structure; firm; common roots; neutral; abrupt smooth boundary.

Bt1—9 to 19 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; firm; few very dark gray (10YR 3/1) clay films on faces of peds; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; slightly alkaline; clear smooth boundary.

Bt2—19 to 25 inches; dark grayish brown (10YR 4/2) clay loam; weak medium subangular blocky structure; firm; many very dark grayish brown (10YR 3/2) clay films on faces of peds; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; slightly alkaline; clear smooth boundary.

2Bt3—25 to 28 inches; brown (10YR 4/3) loam; weak coarse subangular blocky structure; friable; few krotovinas; few very dark grayish brown (10YR 3/2) clay films on faces of peds; slightly alkaline; gradual smooth boundary.

2Bt4—28 to 36 inches; brown (10YR 4/3) very fine sandy loam; weak coarse subangular blocky structure; friable; few very dark grayish brown (10YR 3/2) clay films on faces of peds; few krotovinas; slightly alkaline; clear smooth boundary.

2C1—36 to 45 inches; brown (10YR 5/3 and 4/3) strata of loamy very fine sand; massive; very friable; slightly alkaline; gradual smooth boundary.

2C2—45 to 80 inches; pale brown (10YR 6/3) and brown (10YR 4/3) strata of loamy fine sand; massive; very friable; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

Depth to the base of the cambic horizon: 28 to 50 inches

Particle-size control section: Average of 18 to 35 percent clay and 15 to 70 percent sand coarser than very fine sand

Depth to carbonates: 30 to more than 80 inches

Other characteristics: Some soils on the unprotected side of the levee have a stratified silty clay loam or silt loam surface layer

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silty clay loam or silt loam

Bt or Bw horizon:

Hue—10YR or 2.5Y

Value—3 to 5

Chroma—2 to 4

Texture—silty clay loam, clay loam, loam, or silt loam

2Bt horizon:

Hue—10YR or 2.5Y

Value—3 to 5

Chroma—2 to 4

Texture—clay loam, very fine sandy loam, fine sandy loam, or loam

2C horizon:

Hue—10YR or 2.5Y

Value—4 or 5

Chroma—1 to 6

Texture—typically fine sandy loam or loamy fine sand; strata of loam, silt loam, clay loam, or loamy very fine sand or their gravelly analogs occur in some pedons

Menfro Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Menfro silt loam; in St. Clair County, Illinois; in a gently sloping area of a cultivated field, at an elevation of about 560 feet above mean sea level, approximately 1.5 miles northwest of O'Fallon, about 1,500 feet north and 1,500 feet east of the center of sec. 24, T. 2 N., R. 8 W.; USGS O'Fallon, Illinois topographic quadrangle; lat. 38 degrees 36

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minutes 42 seconds N. and long. 89 degrees 55 minutes 58 seconds W.; UTM Zone 16, Easting 244628, Northing 4277774, NAD 83:

- Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate very fine granular structure; friable; many very fine and few fine roots; about 22 percent clay; moderately acid; abrupt smooth boundary.
- E—7 to 10 inches; yellowish brown (10YR 5/4) silt loam, light yellowish brown (10YR 6/4) dry; moderate medium platy structure parting to moderate very fine subangular blocky; friable; common very fine roots; common fine continuous tubular pores; about 24 percent clay; moderately acid; abrupt smooth boundary.
- Bt1—10 to 18 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; firm; common very fine roots; few fine continuous tubular pores; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; about 32 percent clay; moderately acid; clear smooth boundary.
- Bt2—18 to 35 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; common very fine roots; few fine continuous tubular pores; many distinct brown (10YR 4/3) clay films on faces of peds; about 31 percent clay; moderately acid; gradual smooth boundary.
- Bt3—35 to 50 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; few very fine and fine continuous tubular pores; common distinct brown (10YR 4/3) clay films on faces of peds; about 30 percent clay; moderately acid; gradual smooth boundary.
- Bt4—50 to 62 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium subangular blocky structure; friable; few very fine roots; few very fine and fine vesicular and tubular pores; few distinct brown (10YR 4/3) clay films on vertical faces of peds; about 28 percent clay; moderately acid; gradual smooth boundary.
- Bt5—62 to 70 inches; dark yellowish brown (10YR 4/4) silt loam; weak coarse subangular blocky structure; friable; few very fine roots; common very fine and fine vesicular and tubular pores; few distinct brown (10YR 4/3) clay films lining root channels and pores; about 24 percent clay; slightly acid; gradual smooth boundary.
- Bt6—70 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; weak very coarse prismatic structure; very friable; few very fine roots; common very fine and fine vesicular and tubular pores; very few faint brown (10YR 4/3) clay films lining root channels and pores; about 20 percent clay; slightly acid.

Range in Characteristics

Thickness of the solum: Typically 50 to 70 inches; ranging from 30 to 100 inches

Thickness of loess: 6 feet to more than 20 feet

Particle-size control section: Upper 20 inches of the argillic horizon averages between 27 and 35 percent clay and is less than 7 percent sand; the horizon with the highest clay content has 30 to 38 percent

Ap horizon:

Hue—10YR

Value—3 to 5 (6 or 7 dry)

Chroma—2 to 4

Texture—silt loam or silty clay loam

A horizon (in undisturbed areas):

Hue—10YR

Value—2 to 4 (4 to 6 dry)

Chroma—2 or 3

Texture—silt loam

E horizon (if it occurs):

Hue—10YR

Value—4 or 5 (6 or 7 dry)

Chroma—3 or 4

Texture—silt loam

BE horizon (if it occurs):

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam or silty clay loam

Bt horizon:

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam; ranging to silt loam in the lower part of horizon

C horizon (if it occurs):

Hue—7.5YR or 10YR

Value—4 to 6

Chroma—3 or 4

Texture—silt loam or silty clay loam

Okaw Series

Taxonomic Classification: Fine, smectitic, mesic Chromic Vertic Albaqualfs

Typical Pedon

Okaw silt loam; in Jackson County, Illinois; on nearly level lake plain in a cultivated field, at an elevation of about 390 feet above mean sea level; about 1.25 miles northwest of Vergennes, approximately 1,944 feet west and 105 feet north of the southeast corner of sec. 8, T. 7 S., R. 2 W.; USGS Vergennes, Illinois topographic quadrangle; lat. 37 degrees 55 minutes 26 seconds N. and long. 89 degrees 20 minutes 48 seconds W.; UTM Zone 16, Easting 293742, Northing 4199967, NAD 83:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate very fine and fine granular structure; friable; common very fine roots; few very fine constricted tubular pores; few fine and medium rounded black (N 2.5/0) iron-manganese nodules with sharp boundaries; slightly acid; abrupt smooth boundary.

Eg1—7 to 11 inches; light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 8/2) dry; moderate thin platy structure parting to weak fine granular; friable; few very fine roots; many very fine and fine continuous tubular pores; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; common fine and medium rounded black (N 2.5/0) iron-manganese nodules with sharp boundaries; strongly acid; clear smooth boundary.

Eg2—11 to 15 inches; light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 8/2) dry; weak thin platy structure parting to weak fine granular; friable; few very fine roots; many very fine and fine pores; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; many fine and medium rounded black (N 2.5/0) iron-manganese nodules with sharp boundaries; very strongly acid; abrupt wavy boundary.

2Btg—15 to 31 inches; grayish brown (10YR 5/2) silty clay; weak fine prismatic structure parting to weak fine angular blocky; very firm; few very fine roots; common faint grayish brown (10YR 5/2) clay films on faces of peds; few fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine and medium rounded black (5YR 2.5/1) iron-manganese

- nodules with sharp boundaries; light brownish gray (10YR 6/2) silt loam in krotovinas and along cracks; very strongly acid; clear smooth boundary.
- 2Bg—31 to 41 inches; olive gray (5Y 5/2) silty clay; weak medium prismatic structure parting to weak medium and coarse angular and subangular blocky; very firm; few very fine roots along ped faces; few prominent very dark brown (10YR 2/2) iron-manganese stains on faces of peds; few fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 4/6) boundaries; light brownish gray (10YR 6/2) silt loam along cracks; very strongly acid; gradual smooth boundary.
- 2BCg—41 to 54 inches; olive gray (5Y 5/2) silty clay; weak coarse prismatic structure; very firm; few prominent very dark brown (10YR 2/2) iron-manganese stains on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine and medium rounded black (5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 4/6) boundaries; strongly acid; gradual smooth boundary.
- 2Cg—54 to 63 inches; olive gray (5Y 5/2) silty clay; massive; firm; common prominent very dark brown (10YR 2/2) iron-manganese stains on faces along some cleavage planes; many medium and coarse irregular black (10YR 2/1) masses of iron-manganese accumulation with diffuse strong brown (7.5YR 4/6) boundaries; neutral; clear smooth boundary.
- 2Csg1—63 to 73 inches; olive gray (5Y 5/2) clay; massive; very firm; few prominent shiny slickensides and common distinct olive gray (5Y 4/2) pressure faces along vertical cleavage planes; common fine and medium irregular dark reddish brown (5YR 3/4) masses of iron-manganese accumulation with clear boundaries and few medium irregular black (10YR 2/1) iron-manganese nodules with diffuse strong brown (7.5YR 4/6) boundaries; slightly alkaline; gradual smooth boundary.
- 2Csg2—73 to 80 inches; light olive gray (5Y 6/2) silty clay loam; massive; firm; few distinct shiny slickensides and few faint olive gray (5Y 5/2) pressure faces along cleavage planes; common medium and coarse prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many medium and coarse irregular black (10YR 2/1) masses of iron-manganese accumulation with clear strong brown (7.5YR 4/6) boundaries; slightly alkaline.

Range in Characteristics

Depth to the base of soil development: 40 to 75 inches

Thickness of loess or other silty material: 10 to 20 inches

Other characteristics: Some pedons have a B/E horizon less than 3 inches thick that is mostly Bt material with clay depletions on faces of peds; some pedons contain carbonates in the 2Cg or 2Csg horizon

Ap or A horizon:

Hue—10YR

Value—3 to 5 (6 or 7 dry)

Chroma—1 or 2

Texture—typically silt loam; less commonly silty clay loam

Eg horizon:

Hue—10YR

Value—4 to 7 (6 to 8 dry)

Chroma—1 or 2

Texture—silt loam; less commonly silty clay loam

2Btg and 2Bg horizons:

Hue—10YR, 2.5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—silty clay or clay; some pedons have subhorizons of silty clay loam

2BCg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam, silty clay, or clay

2Cg and 2Csg horizons:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam, silty clay, or clay

Petrolia Series

Taxonomic Classification: Fine-silty, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Petrolia silty clay loam; in Clinton County, Illinois; in a nearly level cultivated field at an elevation of about 412 feet above mean sea level, approximately 3 miles south of Bartelso, about 400 feet south and 800 feet west of the center of sec. 29, T. 1 N., R. 3 W.; USGS Addieville, Illinois topographic quadrangle; lat. 38 degrees 29 minutes 56 seconds N. and long. 89 degrees 27 minutes 28 seconds W.; UTM Zone 16, Easting 285659, Northing 4263792, NAD 83:

Ap—0 to 8 inches; dark grayish brown (2.5Y 4/2) silty clay loam, light brownish gray (2.5Y 6/2) dry; moderate fine granular structure; friable; common very fine roots; few fine rounded black (N 2.5/0) and strong brown (7.5YR 4/6) masses of iron-manganese accumulation throughout; about 34 percent clay; neutral; abrupt smooth boundary.

Bg—8 to 15 inches; dark gray (2.5Y 4/1) silty clay loam; weak medium subangular blocky structure; friable; few very fine roots; few faint dark gray (2.5Y 4/1) pressure faces on faces of peds; common fine prominent dark yellowish brown (10YR 4/4) and common fine faint (2.5Y 4/2) masses of iron accumulation in the matrix; few fine rounded black (N 2.5/0) and strong brown (7.5YR 4/6) masses of iron-manganese accumulation throughout; about 32 percent clay; slightly acid; clear smooth boundary.

Btg1—15 to 26 inches; gray (2.5Y 5/1) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; common distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine and medium prominent dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; few fine and medium rounded black (N 2.5/0) iron-manganese nodules with sharp strong brown (7.5YR 4/6) boundaries and few fine irregular strong brown (7.5YR 5/6) masses of iron-manganese accumulation throughout; about 33 percent clay; slightly acid; clear smooth boundary.

Btg2—26 to 42 inches; gray (2.5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium and coarse subangular blocky; firm; few very fine roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine and medium rounded black (N 2.5/0) iron-manganese nodules with sharp strong brown (7.5YR 4/6) boundaries and

common fine irregular strong brown (7.5YR 5/6) masses of iron-manganese accumulation throughout; about 34 percent clay; slightly acid; gradual smooth boundary.

Btg3—42 to 55 inches; gray (2.5Y 5/1) silty clay loam; weak medium prismatic structure; firm; few very fine roots; few distinct dark gray (2.5Y 4/1) clay films lining root channels and pores; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few medium rounded black (7.5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 5/6) boundaries and common fine and medium irregular strong brown (7.5YR 4/6) masses of iron-manganese accumulation throughout; about 35 percent clay; slightly acid; gradual smooth boundary.

Cg1—55 to 73 inches; gray (2.5Y 6/1) silty clay loam; massive; firm; few very fine roots in old channels; few distinct dark gray (2.5Y 4/1) clay films lining root channels and pores; many fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few medium rounded black (7.5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 5/6) boundaries and common fine and medium irregular strong brown (7.5YR 4/6) masses of iron-manganese accumulation throughout; about 33 percent clay; neutral; diffuse smooth boundary.

Cg2—73 to 80 inches; gray (2.5Y 6/1) silty clay loam; massive; firm; common medium and coarse prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine irregular black (7.5YR 2.5/1) iron-manganese nodules with clear strong brown (7.5YR 5/6) boundaries and few fine and medium irregular strong brown (7.5YR 4/6) masses of iron-manganese accumulation throughout; dark gray (2.5Y 4/1) krotovinas; about 36 percent clay; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 80 inches

Particle-size control section: Average of 27 to 35 percent clay and less than 20 percent fine sand or coarser material

Ap or A horizon:

Hue—10YR or 2.5Y

Value—typically 4 to 6; 3 in some uncultivated areas

Chroma—1 or 2

Texture—silty clay loam

Bg or Btg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam

Reaction—moderately acid to neutral

Cg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—dominantly silty clay loam; silt loam in some pedons; other pedons have strata of silty clay, silt loam, loam, or fine sandy loam

Reaction—strongly acid to slightly alkaline

Piopolis Series

Taxonomic Classification: Fine-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Piopolis silty clay loam; in Hamilton County, Illinois; in a nearly level area in a cultivated field, at an elevation of about 384 feet above mean sea level, approximately 10 miles north of McLeansboro, about 1,340 feet south and 1,300 feet west of the center of sec. 26, T. 3 S., R. 6 E.; USGS Belle Prairie City, Illinois topographic quadrangle; lat. 38 degrees 13 minutes 47 seconds N. and long. 88 degrees 30 minutes 55 seconds W.; UTM Zone 16, Easting 367380, Northing 4232385, NAD 83:

- Ap—0 to 7 inches; grayish brown (10YR 5/2) silty clay loam, light grayish brown (10YR 6/2) dry; weak medium granular structure; friable; slightly acid; abrupt smooth boundary.
- Bg1—7 to 14 inches; light brownish gray (10YR 6/2) silty clay loam; weak coarse subangular blocky structure; firm; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common medium faint gray (10YR 6/1) iron depletions in the matrix; strongly acid; gradual smooth boundary.
- Bg2—14 to 23 inches; gray (10YR 6/1) silty clay loam; weak coarse subangular blocky structure; firm; many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few dark iron and manganese concretions; strongly acid; gradual smooth boundary.
- Bg3—23 to 37 inches; gray (10YR 6/1) silty clay loam; weak coarse subangular blocky structure; firm; many medium prominent strong brown (7.5YR 5/6) and common medium distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common black iron and manganese concretions; strongly acid; gradual smooth boundary.
- Cg—37 to 80 inches; gray (10YR 6/1) silty clay loam; massive; firm; few coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; strongly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 20 to 60 inches

Particle-size control section: Average of 27 to 35 percent clay and less than 15 percent fine sand or coarser material

Other characteristics: An irregular decrease in organic carbon content as depth increases

Ap or A horizon:

Hue—10YR, 2.5Y, or 5Y

Value—typically 4 to 6; 3 in some uncultivated areas

Chroma—1 to 3

Texture—commonly silty clay loam; less commonly silt loam

Bg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—silty clay loam

Cg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 6

Chroma—0 to 2

Texture—dominantly silty clay loam or silt loam; thin strata of fine sandy loam, loam, or silty clay occur in some pedons

Raccoon Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Typic Endoaqualfs

Typical Pedon

Raccoon silt loam; in Saline County, Illinois; in a cultivated field at an elevation of about 425 feet above mean sea level, about 1 mile east of West End, approximately 135 feet north and 2,095 feet east of the center of sec. 30, T. 7 S., R. 5 E.; USGS Akin, Illinois topographic quadrangle; lat. 37 degrees 53 minutes 08 seconds N. and long. 88 degrees 41 minutes 23 seconds W.; UTM Zone 16, Easting 351411, Northing 4194463, NAD 83:

- Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; common fine very dark grayish brown (10YR 3/2) masses of iron-manganese accumulation throughout; neutral; abrupt smooth boundary.
- Eg1—6 to 10 inches; dark grayish brown (10YR 4/2) silt loam; weak thin platy structure; firm, dense as if compacted like a plow sole; common fine very dark grayish brown (10YR 3/2) masses of iron-manganese accumulation throughout; neutral; abrupt smooth boundary.
- Eg2—10 to 14 inches; dark grayish brown (10YR 4/2) silt loam; weak medium platy structure parting to weak fine granular; friable; common fine faint grayish brown (10YR 5/2) and few fine distinct light gray (10YR 7/1) iron depletions in the matrix; common fine very dark grayish brown (10YR 3/2) masses of iron-manganese accumulation throughout; strongly acid; clear smooth boundary.
- Eg3—14 to 30 inches; gray (10YR 6/1) silt loam; weak medium platy structure parting to weak fine granular; friable; common very fine constricted tubular pores; common medium prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; many fine black (10YR 2/1) masses of iron-manganese accumulation throughout; few grayish brown (10YR 5/2) krotovinas; very strongly acid; clear smooth boundary.
- Btg1—30 to 37 inches; gray (10YR 6/1) silty clay loam; weak medium prismatic structure parting to weak fine subangular blocky; firm; few very fine tubular pores; common distinct dark grayish brown (10YR 4/2) clay films on faces of pedis; common fine prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common fine black (10YR 2/1) iron-manganese concretions; very strongly acid; clear smooth boundary.
- Btg2—37 to 47 inches; gray (10YR 6/1) silty clay loam; moderate medium prismatic structure parting to weak medium subangular blocky; firm; common distinct dark grayish brown (10YR 4/2) clay films on faces of pedis; few fine faint light gray (10YR 7/1) iron depletions and many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine black (10YR 2/1) iron-manganese concretions; very strongly acid; clear smooth boundary.
- Btg3—47 to 59 inches; gray (10YR 6/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few faint gray (10YR 5/1) clay films and common prominent dark olive gray (5Y 3/2) organo-clay films on faces of pedis; common medium prominent strong brown (7.5YR 5/6) and dark brown (7.5YR 4/4) masses of iron accumulation in the matrix; few fine black (10YR 2/1) iron-manganese concretions; strongly acid; clear smooth boundary.
- Cg—59 to 80 inches; gray (5Y 6/1 and 10YR 6/1) silt loam; massive; friable; many coarse distinct grayish brown (10YR 5/2) and prominent brown (7.5YR 4/4) masses of iron accumulation in the matrix; slightly acid increasing to neutral in the lower part of horizon.

Range in Characteristics

Depth to the top of the argillic horizon: 24 to 36 inches

Depth to the base of the argillic horizon: 40 to 75 inches

Particle-size control section: Average of 27 to 35 percent clay, less than 10 percent sand, and less than 2 percent gravel

Ap or A horizon:

Hue—10YR

Value—3 to 6 (5 to 7 dry)

Chroma—2 or 3

Texture—silt loam

Eg horizon:

Hue—10YR or 2.5Y

Value—4 to 7 (6 to 8 dry)

Chroma—1 or 2

Texture—silt loam

Btg horizon:

Hue—10YR, 2.5Y, 5Y, or neutral

Value—4 to 7

Chroma—0 to 2

Texture—dominantly silty clay loam; silt loam in the upper or lower subhorizons in some pedons

Cg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 7

Chroma—1 or 2

Texture—dominantly silt loam or loam; stratified loamy fine sand to silty clay in some pedons

Riley Series

Taxonomic Classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Fluvaquentic Hapludolls

Typical Pedon

Riley silty clay loam; in Adams County, Illinois; on a low ridge in a cultivated field at an elevation of about 470 feet above mean sea level, about 2 miles west of the village of Marblehead, 1,595 feet east and 340 feet south of the northwest corner of sec. 2, T. 3 S., R. 9 W.; USGS Quincy Southwest, Illinois topographic quadrangle; lat. 39 degrees 50 minutes 52 seconds N. and long. 91 degrees 24 minutes 41 seconds W.; UTM Zone 15, Easting 635918, Northing 4412075, NAD 83:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; moderate fine granular structure; firm; common fine roots throughout; very few distinct very dark gray (10YR 3/1) organic coatings on faces of pedis; slightly acid; abrupt smooth boundary.

A—7 to 13 inches; very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; firm; common fine roots throughout; moderately acid; abrupt smooth boundary.

Bw1—13 to 19 inches; dark grayish brown (10YR 4/2) silty clay loam; weak coarse subangular blocky structure; firm; common fine roots throughout and common very fine and fine roots in cracks; very few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of pedis; many fine distinct brown (7.5YR 4/3) masses of

iron and manganese accumulation throughout; moderately acid; clear smooth boundary.

Bw2—19 to 27 inches; grayish brown (10YR 5/2) loam; moderate coarse subangular blocky structure; firm; common very fine and fine roots in cracks; many fine and medium distinct dark yellowish brown (10YR 3/6) masses of iron and manganese accumulation throughout; moderately acid; clear smooth boundary.

2Bw3—27 to 36 inches; brown (10YR 4/3) loamy sand; weak coarse subangular blocky structure; friable; few fine faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation throughout; moderately acid; clear smooth boundary.

2C1—36 to 60 inches; brown (10YR 5/3) sand; single grain; loose; neutral; clear smooth boundary.

2C2—60 to 80 inches; 60 percent brown (10YR 5/3) and 40 percent pale brown (10YR 6/3) sand; single grain; loose; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: Typically 18 to 28 inches; ranging to 40 inches

Thickness of the mollic epipedon: 10 to 20 inches

Reaction: Moderately acid to slightly alkaline in the solum and moderately acid to moderately alkaline in the underlying material

Other characteristics: The content of sand coarser than very fine sand is between 15 and 60 percent in the particle-size control section

A or Ap horizon:

Hue—10YR

Value—2 or 3

Chroma—1 to 3

Texture—silty clay loam, clay loam, silt loam, or loam

Bw horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—silty clay loam, clay loam, sandy clay loam, loam, or silt loam

Clay content—24 to 35 percent

Sand content—20 to 65 percent

2Bw or 2C horizon:

Hue—10YR or 2.5Y

Value—4 to 7

Chroma—2 to 4

Texture—horizon commonly is loamy sand or sand and contains lenses or strata of silt loam, loam, fine sandy loam, loamy fine sand, coarse sand, or silty clay loam

Clay content—2 to 10 percent

Sand content—20 to 90

Roby Series

Taxonomic Classification: Coarse-loamy, mixed, superactive, mesic Aquic Hapludalfs

Typical Pedon

Roby fine sandy loam; in Randolph County, Illinois; in a gently sloping cultivated field at an elevation of about 405 feet above mean sea level, about 3 miles northwest of

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Ellis Grove, Illinois; State Plain Coordinates 498,000 feet north and 562,750 feet east (Illinois West Zone); T. 6 S., R. 8 W.; USGS Evansville, Illinois topographic quadrangle; lat. 38 degrees 02 minutes 03 seconds N. and long. 89 degrees 56 minutes 55 seconds W.; UTM Zone 16, Easting 241212, Northing 4213711, NAD 83:

- Ap—0 to 9 inches; dark grayish brown (10YR 4/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure parting to weak medium platy; very friable; neutral; abrupt smooth boundary.
- E—9 to 13 inches; brown (10YR 4/3) fine sandy loam; weak medium platy structure parting to moderate medium granular; very friable; neutral; clear smooth boundary.
- BE—13 to 16 inches; brown (10YR 4/3) fine sandy loam; weak and moderate fine and medium subangular blocky structure; very friable; few faint pale brown (10YR 6/3) coatings of very fine sand on faces of peds; few dark iron-manganese stains; slightly acid; clear smooth boundary.
- Bt1—16 to 21 inches; brown (10YR 5/3) fine sandy loam; moderate medium subangular blocky structure; very friable; common faint brown (10YR 4/3) clay films on faces of peds; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; common dark iron-manganese stains; moderately acid; clear smooth boundary.
- Bt2—21 to 27 inches; brown (10YR 5/3) loam; strong medium subangular blocky structure; friable; common faint grayish brown (10YR 5/2) and brown (10YR 4/3) clay films on faces of peds; many coarse faint light brownish gray (10YR 6/2) iron depletions and common coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; moderately acid; abrupt smooth boundary.
- Bt3—27 to 31 inches; brown (10YR 5/3) clay loam; moderate medium subangular blocky structure parting to weak fine prismatic; firm; many distinct brown (10YR 4/3) clay films and many distinct light brownish gray (10YR 6/2) coatings of very fine sand on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions and many medium faint brown (7.5YR 5/4) masses of iron accumulation in the matrix; common fine dark iron-manganese stains; slightly acid; abrupt smooth boundary.
- Bt4—31 to 41 inches; brown (10YR 5/3) loam; strong medium subangular blocky structure parting to weak fine prismatic; friable; many distinct brown (10YR 4/3) clay films and many faint light brownish gray (10YR 6/2) coatings of very fine sand on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; common fine dark iron-manganese stains and concretions; neutral; clear smooth boundary.
- BCtg—41 to 49 inches; grayish brown (10YR 5/2) fine sandy loam; weak medium prismatic blocky structure parting to weak medium subangular blocky; friable; common faint brown (10YR 4/3) clay films and common faint light brownish gray (10YR 6/2) coatings of very fine sand on faces of peds; many medium and coarse distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; many fine dark iron-manganese stains and concretions; neutral; gradual smooth boundary.
- Cg—49 to 80 inches; stratified grayish brown (10YR 5/2) fine sandy loam and brown (10YR 4/3) loamy fine sand; massive; friable; common medium faint grayish brown (10YR 5/2) iron depletions and many medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; many fine dark iron-manganese stains and concretions; neutral.

Range in Characteristics

Depth to the base of soil development: 30 to 60 inches

Particle-size control section: Average of 12 to 18 percent clay and 45 to 80 percent sand

Ap horizon:

Hue—10YR

Value—4 or 5; 3 in some uncultivated areas

Chroma—typically 2 or 3; 1 in some uncultivated areas

Texture—typically fine sandy loam or loam; loamy fine sand or sandy loam in some pedons

E horizon:

Hue—10YR

Value—4 to 6

Chroma—3 or 4

Texture—loamy fine sand or fine sandy loam

Bt horizon:

Hue—10YR

Value—4 to 6

Chroma—2 to 6

Texture—fine sandy loam, sandy loam, or loam; thin layers of clay loam or sandy clay loam occur in some pedons

C horizon:

Hue—7.5YR or 10YR

Value—4 to 6

Chroma—2 to 8

Texture—stratified sand to loam or the gravelly analogs of stratified textures

Ruark Series

Taxonomic Classification: Fine-loamy, mixed, active, mesic Typic Endoaqualfs

Typical Pedon

Ruark fine sandy loam; in Alexander County, Illinois; on a nearly level terrace in a cultivated field at an elevation of about 334 feet above mean sea level, approximately $\frac{3}{4}$ mile south of Sandusky, about 1,195 feet north and 840 feet west of the southeast corner of sec. 24, T. 15 S., R. 2 W.; USGS Tamms, Illinois topographic quadrangle; lat. 37 degrees 11 minutes 36 seconds N. and long. 89 degrees 16 minutes 26 seconds W.; UTM Zone 16, Easting 298178, Northing 4118726, NAD 83:

Ap—0 to 7 inches; grayish brown (10YR 5/2) fine sandy loam, light gray (10YR 7/2) dry; weak medium granular structure; friable; common fine distinct yellowish brown (10YR 5/4) masses of iron-manganese accumulation in the matrix; strongly acid; abrupt smooth boundary.

Eg—7 to 18 inches; grayish brown (10YR 5/2) fine sandy loam; weak thick platy structure; friable; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; very strongly acid; clear smooth boundary.

BEg—18 to 20 inches; gray (10YR 5/1) loam; weak coarse subangular blocky structure; friable; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; very strongly acid; clear smooth boundary.

Btg1—20 to 33 inches; gray (10YR 5/1) clay loam; weak medium prismatic structure parting to moderate coarse subangular blocky; friable; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; common medium faint light gray (10YR 7/2) iron depletions and common fine and medium prominent brownish yellow (10YR 6/6) and yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; very strongly acid; gradual smooth boundary.

Btg2—33 to 37 inches; gray (10YR 6/1) sandy clay loam; weak coarse subangular

blocky structure; friable; few faint grayish brown (10YR 5/2) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6 and 5/8) masses of iron in the matrix; strongly acid; clear smooth boundary.

Cg1—37 to 44 inches; gray (10YR 6/1) loam; massive; friable; common fine prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation in the matrix; common fine and medium concretions and stains (iron and manganese oxides); slightly acid; clear smooth boundary.

Cg2—44 to 80 inches; light brownish gray (10YR 6/2) fine sandy loam; massive; friable; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Solum thickness: Commonly 35 to 40 inches; ranging from 30 to 50 inches

Reaction: Moderately acid to very strongly acid in the solum, except where surface layers have been limed

Particle-size control section: Average of 20 to 35 percent clay and more than 30 percent fine sand or coarser material

A or Ap horizon:

Hue—10YR

Value—3 to 5 (6 or 7 dry)

Chroma—1 or 2

Texture—fine sandy loam, loam, or very fine sandy loam

Eg horizon:

Hue—10YR or 2.5Y

Value—5 to 7

Chroma—1 or 2

Texture—loam, sandy loam, or fine sandy loam

BEg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 or 2

Texture—loam, sandy loam, or fine sandy loam

Btg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 or 2

Texture—sandy clay loam, clay loam, loam, or sandy loam

Cg horizon:

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 or 2

Texture—fine sandy loam to sandy clay loam; thin strata of loamy sand, sand, fine gravel, loam, silt loam, or silty clay loam occur in some pedons

Sarpy Series

Taxonomic Classification: Mixed, mesic Typic Udipsamments

Typical Pedon

Sarpy fine sand; in Monroe County, Illinois; on a nearly level to gently sloping natural levee in a cultivated field, at an elevation of about 393 feet above mean sea level, on

Meissner Island, approximately 2 miles northwest of Valmeyer, about 2,060 feet west and 2,280 feet south of the northeast corner of sec. 6, T. 3 S., R. 11 W.; USGS Valmeyer, Illinois-Missouri topographic quadrangle; lat. 38 degrees 18 minutes 23 seconds N. and long. 90 degrees 21 minutes 50 seconds W.; UTM Zone 15, Easting 730496, Northing 4242892, NAD 83:

- Ap—0 to 9 inches; dark grayish brown (10YR 4/2) fine sand, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; common very fine roots; slightly effervescent; slightly alkaline; abrupt smooth boundary.
- C1—9 to 19 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; few very fine roots; strongly effervescent; slightly alkaline; gradual smooth boundary.
- C2—19 to 29 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; few very fine roots; few coarse faint brown (10YR 4/3) masses of iron accumulation in the matrix; few fine dark masses of iron-manganese accumulation; strongly effervescent; slightly alkaline; gradual smooth boundary.
- C3—29 to 56 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; few very fine roots; common medium faint brown (10YR 4/3) masses of iron accumulation in the matrix; common fine dark masses of iron-manganese accumulation; strongly effervescent; slightly alkaline; gradual smooth boundary.
- C4—56 to 80 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; common medium faint brown (10YR 4/3) masses of iron accumulation in the matrix; strongly effervescent; slightly alkaline.

Range in Characteristics

Particle-size control section: Less than 10 percent silt plus clay and less than 40 percent silt plus clay and very fine sand

Depth to carbonates: 0 to 60 inches

Ap or A horizon:

Hue—10YR or 2.5Y

Value—3 to 5 (4 to 6 dry)

Chroma—1 to 3

Texture—sand, loamy sand, loamy fine sand, sandy loam, or fine sand

C horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—2 to 4

Texture—stratified loamy fine sand, loamy sand, fine sand, or sand

Sciotoville Series

Taxonomic Classification: Fine-silty, mixed, active, mesic Fragiatic Hapludalfs

Typical Pedon

Sciotoville silt loam; in Massac County, Illinois; in a nearly level field, at an elevation of about 342 feet above mean sea level, approximately 180 feet south of a railroad track and 120 feet east of an old lane in the SE1/4 NW1/4 NE1/4 of sec. 8, T. 16 S., R. 5 E.; USGS Metropolis, Illinois topographic quadrangle; lat. 37 degrees 08 minutes 38 seconds N. and long. 88 degrees 41 minutes 16 seconds W.; UTM Zone 16, Easting 354620, Northing 4132245, NAD 83:

- Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; many very fine very dark grayish brown (10YR 3/2) iron-manganese concretions; strongly acid; abrupt smooth boundary.

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- BE—8 to 14 inches; yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; friable; common very fine black (N 2/0) and very dark grayish brown (10YR 3/2) iron-manganese concretions; very dark grayish brown (10YR 3/2) films in root channels; very strongly acid; clear smooth boundary.
- Bt—14 to 24 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; few fine distinct pale brown (10YR 6/3) mottles; few faint yellowish brown (10YR 5/4) clay films on faces of pedis; common fine black (N 2/0) and very dark grayish brown (10YR 3/2) iron-manganese concretions; very strongly acid; clear smooth boundary.
- Btx1—24 to 32 inches; brown (7.5YR 4/4) silt loam; coarse prismatic structure; very firm; few prominent light brownish gray (10YR 6/2) silt coatings and few distinct yellowish brown (10YR 5/4) clay films on faces of pedis; few fine prominent gray (10YR 6/1) iron depletions; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; few very fine very dark grayish brown (10YR 3/2) iron-manganese concretions; brittle; very strongly acid; gradual smooth boundary.
- Btx2—32 to 42 inches; brown (7.5YR 4/4) silt loam; moderate very coarse prismatic structure; very firm; common prominent light gray (10YR 7/2) silt coatings and few prominent light brownish gray (10YR 6/2) clay films on faces of pedis; common fine distinct light gray (10YR 7/2) iron depletions; common very fine black (N 2/0) and very dark grayish brown (10YR 3/2) iron-manganese concretions; brittle; very strongly acid; gradual smooth boundary.
- BC—42 to 52 inches; brown (7.5YR 4/4) clay loam; weak medium prismatic structure; firm; few prominent grayish brown (10YR 5/2) clay films on faces of pedis; common medium distinct light brownish gray (10YR 6/2) iron depletions; common very fine black (N 2/0) and very dark grayish brown (10YR 3/2) iron-manganese concretions; very strongly acid; gradual smooth boundary.
- C—52 to 80 inches; dark yellowish brown (10YR 4/4) silty clay loam; massive; firm; common fine distinct light brownish gray (10YR 6/2) iron depletions; common very fine black (N 2/0) and very dark grayish brown (10YR 3/2) iron-manganese concretions; strongly acid.

Range in Characteristics

Thickness of the solum: 45 to 80 inches

Depth to the fragic layer: 18 to 38 inches

Rock fragment content (mainly water-worn fine sandstone or quartzite): 0 to 2 percent, by volume, in the Ap, A, or E horizons; 0 to 5 percent in the Bt and Btx horizons; 0 to 15 percent in the C horizon

Other characteristics: Some pedons have an E horizon

Ap or A horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—2 or 3

Texture—silt loam

Reaction—slightly acid to strongly acid

E or BE horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—silt loam, silty clay loam, or loam with a high percentage of very fine sand

Reaction—slightly acid to very strongly acid

Bt horizon:

Hue—10YR, 7.5YR, or 5YR

Value—4 or 5

Chroma—3 to 6

Texture—silt loam, silty clay loam, or loam with a high percentage of very fine sand

Reaction—strongly acid or very strongly acid

Btx horizon:

Hue—10YR, 7.5YR, or 5YR

Value—4 to 6

Chroma—3 to 6

Texture—silt loam, silty clay loam, or loam

Reaction—strongly acid or very strongly acid in the upper part of horizon; moderately acid to very strongly acid in the lower part

BC or C horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—horizon is stratified or has dominant textures of loam, silt loam, silty clay loam, or sandy loam with thin lenses of loamy sand in some pedons

Reaction—slightly acid to very strongly acid

The Sciotoville soils in this survey area are considered taxadjuncts to the series because they do not have the coarseness of structure and degree of brittleness in the fragic layer as defined for the series. In addition, they have a slightly higher sand content in the particle-size control section than is defined for the series. These differences, however, do not significantly affect the use and management of the soils. These soils classify as fine-loamy, mixed, active, mesic Fraguaquic Hapludalfs.

Sharon Series

Taxonomic Classification: Coarse-silty, mixed, active, acid, mesic Oxyaquic Udifluvents

Typical Pedon

Sharon silt loam, frequently flooded; in Franklin County, Illinois; at an elevation of about 424 feet above mean sea level, approximately 1,800 feet west and 140 feet south of the northeast corner of sec. 25, T. 7 S., R. 4 E.; USGS Akin, Illinois topographic quadrangle; lat. 37 degrees 53 minutes 32 seconds N. and long. 88 degrees 42 minutes 45 seconds W.; UTM Zone 16, Easting 349425, Northing 4195221, NAD 83:

Ap—0 to 3 inches; 60 percent brown (10YR 4/3) and 40 percent dark brown (10YR 3/3) silt loam, light brownish gray (10YR 6/2) dry; strong fine and medium granular structure; friable; common fine and medium roots throughout; slightly acid; abrupt smooth boundary.

A1—3 to 9 inches; 60 percent brown (10YR 4/3) and 40 percent dark brown (10YR 3/3) silt loam, light brownish gray (10YR 6/2) dry; strong medium granular structure; friable; common fine and medium roots throughout; strongly acid; abrupt smooth boundary.

A2—9 to 13 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; strong fine granular structure; friable; common fine and medium roots throughout; strongly acid; clear smooth boundary.

CA—13 to 17 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent brown (10YR 4/3) silt loam; massive; friable; few fine roots throughout; strongly acid; clear smooth boundary.

C1—17 to 23 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular

blocky structure; friable; few fine roots throughout; very strongly acid; clear smooth boundary.

C2—23 to 29 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; strongly acid; clear smooth boundary.

C3—29 to 40 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; very few faint brown (10YR 4/3) organic coats in root channels and pores; common fine distinct grayish brown (10YR 5/2) iron depletions; few fine rounded soft masses of iron-manganese; strongly acid; clear smooth boundary.

C4—40 to 80 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few faint very dark grayish brown (10YR 3/2) organic coats in root channels and pores; common fine distinct grayish brown (10YR 5/2) iron depletions; few fine rounded soft masses of iron-manganese; moderately acid.

Range in Characteristics

Reaction: Strongly acid or very strongly acid to a depth of 40 inches; ranging from very strongly acid to neutral below a depth of 40 inches

Particle-size control section: Average of less than 18 percent clay and less than 15 percent fine or coarser sand

Other characteristics: Some pedons contain a buried A horizon below a depth of 40 inches

Ap and A horizons:

Hue—10YR

Value—4 or 5; 2 or 3 in some uncultivated areas

Chroma—typically 3 or 4; 2 in some uncultivated areas

Texture—silt loam

CA or Bw horizon (if it occurs):

Hue—10YR

Value—4 or 5

Chroma—3 to 6

Texture—silt loam

C horizon:

Hue—10YR, 7.5YR, or 2.5Y

Value—4 to 7

Chroma—2 to 6

Texture—typically silt loam; stratified loam, sandy loam, loamy sand, or sand in some pedons

Stookey Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Typic Hapludalfs

Typical Pedon

Stookey silt loam; in Monroe County, Illinois; on a steep, west-facing convex slope under mixed hardwoods, at an elevation of about 530 feet above mean sea level, approximately 1 mile northeast of Fults, about 2,300 feet north of the intersection of Sutterville Road and Fults Road and 125 feet west of Sutterville Road, in the Renault Grant, T. 4 S., R. 10 W.; USGS Renault, Illinois topographic quadrangle; lat. 38 degrees 10 minutes 27 seconds N. and long. 90 degrees 12 minutes 05 seconds W.; UTM Zone 15, Easting 745152, Northing 4228824, NAD 83:

A—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many very fine and fine roots; about 16 percent clay; moderately acid; abrupt smooth boundary.

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- E—3 to 6 inches; dark yellowish brown (10YR 4/4) silt loam, light yellowish brown (10YR 6/4) dry; weak medium platy structure parting to weak medium granular; friable; common very fine and fine roots; about 18 percent clay; strongly acid; clear smooth boundary.
- Bt1—6 to 13 inches; brown (7.5YR 4/4) silt loam; moderate fine subangular blocky structure; friable; common very fine and fine roots; few distinct light gray (10YR 7/2, dry) clay depletions on faces of peds; common faint brown (7.5YR 4/4) clay films on faces of peds; about 25 percent clay; strongly acid; clear smooth boundary.
- Bt2—13 to 24 inches; brown (7.5YR 4/4) silt loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; common very fine and fine roots; common faint brown (7.5YR 4/4) clay films on faces of peds; about 24 percent clay; strongly acid; gradual smooth boundary.
- Bt3—24 to 35 inches; brown (7.5YR 5/4) silt loam; weak fine prismatic structure parting to weak fine subangular blocky; friable; few very fine roots; common faint brown (7.5YR 4/4) clay films on faces of peds; about 23 percent clay; moderately acid; gradual smooth boundary.
- Bt4—35 to 53 inches; brown (7.5YR 5/4) silt loam; weak fine prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; few faint brown (7.5YR 4/4) clay films on faces of peds; about 22 percent clay; moderately acid; gradual smooth boundary.
- BC—53 to 62 inches; brown (7.5YR 4/4) silt loam; weak medium subangular blocky structure; friable; few very fine roots; about 20 percent clay; slightly acid; gradual smooth boundary.
- C—62 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; massive; very friable; few very fine roots; about 17 percent clay; neutral.

Range in Characteristics

Depth to the base of soil development: 40 to more than 80 inches

Thickness of loess: 80 inches or more

Particle-size control section: 18 to 27 percent clay; less than 7 percent fine sand or coarser material

Depth to carbonates: More than 60 inches

Other characteristics: Some pedons have an EB or a BE horizon

A horizon:

Hue—10YR

Value—3 to 5

Chroma—1 to 3

Texture—silt loam

E horizon:

Hue—10YR

Value—4 to 6 (6 to 8 dry)

Chroma—2 to 4

Texture—silt loam or silt

Bt and BC horizons (if they occur):

Hue—5YR, 7.5YR, or 10YR

Value—4 to 6

Chroma—3 to 6

Texture—typically silt loam; thin subhorizons of silty clay loam occur in some pedons

C horizon:

Hue—7.5YR or 10YR

Value—4 to 6

Chroma—2 to 6

Texture—silt loam or silt

The Stookey soils in this survey area are considered taxadjuncts to the series because they do not have the coarseness of structure and degree of brittleness in the fragic layer as defined for the series. Also, they have a slightly higher sand content in the particle-size control section than is defined for the series. These differences, however, do not significantly affect the use and management of the soils. These soils classify as fine-loamy, mixed, active, mesic Fraguaquic Hapludalfs.

Stoy Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Fraguaquic Hapludalfs

Typical Pedon

Stoy silt loam; in Gallatin County, Illinois; in a nearly level area in a cultivated field, at an elevation of about 389 feet above mean sea level, approximately 2 miles southwest of Omaha, about 1,320 feet east of the southwest corner of sec. 28, T. 7 S., R. 8 E.; USGS Norris City, Illinois topographic quadrangle; lat. 37 degrees 52 minutes 45 seconds N. and long. 88 degrees 19 minutes 58 seconds W.; UTM Zone 16, Easting 382795, Northing 4193237, NAD 83:

- Ap—0 to 6 inches; brown (10YR 4/3) silt loam; weak fine granular structure; friable; many roots; few fine concretions of iron and manganese oxides throughout; very strongly acid; abrupt smooth boundary.
- E1—6 to 9 inches; mixed light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/4) silt loam; weak thin platy structure parting to weak fine granular; friable; common roots; common very dark grayish brown (10YR 3/2) organic stains; few medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; many fine concretions of iron and manganese oxides throughout; very strongly acid; clear smooth boundary.
- E2—9 to 13 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium granular structure; friable; common roots; common medium distinct light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine concretions of iron and manganese oxides throughout; very strongly acid; clear smooth boundary.
- BE—13 to 16 inches; yellowish brown (10YR 5/6) silty clay loam; weak fine and medium subangular blocky structure; friable; common roots; few medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; many fine concretions of iron and manganese oxides throughout; very strongly acid; clear smooth boundary.
- Bt1—16 to 24 inches; yellowish brown (10YR 5/8) silty clay loam; moderate fine subangular blocky structure; firm; common roots; common prominent brown (10YR 4/3) clay films on faces of peds; common prominent light brownish gray (10YR 6/2) clay depletions on faces of peds, light gray (10YR 7/1) dry; few fine prominent light brownish gray (10YR 6/2) and brown (10YR 5/3) iron depletions in the matrix; many fine concretions of iron and manganese oxides throughout; very strongly acid; clear smooth boundary.
- Bt2—24 to 27 inches; yellowish brown (10YR 5/8 and 5/4) silty clay loam; moderate coarse subangular blocky structure parting to moderate fine and very fine angular blocky; firm; common roots; many prominent light brownish gray (10YR 6/2) clay depletions on faces of larger peds and many distinct brown (10YR 4/3) clay films on faces of smaller angular peds; few fine prominent light gray (10YR 7/1) iron

depletions in the matrix; many medium concretions of iron and manganese oxides throughout; many black (10YR 2/1) threadlike manganese coatings and spherical manganese masses; very strongly acid; clear smooth boundary.

Bt3—27 to 32 inches; yellowish brown (10YR 5/8 and 5/4) silty clay loam; moderate medium subangular blocky structure; very firm; common roots; many distinct brown (10YR 4/3) clay films on faces of peds; few fine prominent light gray (10YR 7/1) and light brownish gray (10YR 6/2) iron depletions in the matrix; many fine concretions of iron and manganese oxides throughout; common black (10YR 2/1) threadlike manganese coatings and spherical manganese masses; very strongly acid; gradual smooth boundary.

Btx1—32 to 36 inches; mottled grayish brown (10YR 5/2), brown (10YR 5/3), and yellowish brown (10YR 5/8) silty clay loam; weak coarse subangular blocky structure; firm; common roots; common distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct light gray (10YR 7/1) iron depletions in the matrix; many fine concretions of iron and manganese oxides throughout; very strongly acid; gradual smooth boundary.

Btx2—36 to 45 inches; mottled grayish brown (10YR 5/2), brown (10YR 5/3), and yellowish brown (10YR 5/8) silty clay loam; weak coarse prismatic structure; extremely firm; few roots; few distinct (10YR 4/3) clay films on faces of peds; common fine and medium distinct light gray (10YR 7/1) iron depletions in the matrix; many fine concretions of iron and manganese oxides throughout; very strongly acid; gradual smooth boundary.

Bx—45 to 80 inches; mottled grayish brown (10YR 5/2), pale brown (10YR 6/3), yellowish brown (10YR 5/8), and light gray (10YR 7/1) silt loam; weak medium prismatic structure; extremely firm; few very dark grayish brown (10YR 3/2) threadlike manganese coatings and spherical manganese masses; many fine concretions of iron and manganese oxides; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 35 to 65 inches

Depth to the fragic soil properties: 25 to about 45 inches

Particle-size control section: Average of 27 to 35 percent clay

Series control section: Less than 10 percent fine sand or coarser material throughout the profile

Ap horizon:

Hue—10YR

Value—4 or 5

Chroma—2 or 3

Texture—silt loam

A horizon (in undisturbed areas):

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—commonly silt loam; less commonly silty clay loam

E, BE, and B/E horizons:

Hue—10YR

Value—5 or 6

Chroma—3 or 4

Texture—commonly silt loam; silty clay loam in some BE horizons

Bt horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—2 to 8

Texture—silty clay loam or silt loam

Btx and Bx horizons:

Hue—10YR

Value—5 to 7

Chroma—2 to 8

Texture—silty clay loam or silt loam

Clay content—24 to 35 percent

C horizon (if it occurs):

Hue—10YR

Value—5 to 7

Chroma—1 to 8

Texture—silt loam

Clay content—20 to 27 percent

Tice Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls

Typical Pedon

Tice silty clay loam; in Monroe County, Illinois; in a nearly level area in a cultivated field, at an elevation of about 398 feet above mean sea level, approximately 1/2 mile northwest of Chalfin Bridge, about 550 feet southwest of the railroad tracks and 150 feet southeast of Outlet Road, in parcel S. 707, T. 4 S., R. 11 W; USGS Selma, Illinois-Missouri topographic quadrangle; lat. 38 degrees 12 minutes 53 seconds N. and long. 90 degrees 16 minutes 37 seconds W.; UTM Zone 15, Easting 738393, Northing 4233146, NAD 83:

Ap—0 to 9 inches; very dark brown (10YR 2/2) silty clay loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; many very fine roots; neutral; abrupt smooth boundary.

A—9 to 16 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; many very fine roots; common distinct very dark brown (10YR 2/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bw1—16 to 24 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; neutral; clear smooth boundary.

Bw2—24 to 35 inches; brown (10YR 4/3) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; firm; common very fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; neutral; clear smooth boundary.

Bg1—35 to 47 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine rounded dark brown (7.5YR 3/3) masses of iron-manganese accumulation; neutral; gradual smooth boundary.

Bg2—47 to 61 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium angular blocky; firm; few very fine roots; many prominent very dark grayish brown (10YR 3/2) organo-clay films on

faces of peds; common fine and medium distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine rounded dark brown (7.5YR 3/3) masses of iron-manganese accumulation; neutral; gradual smooth boundary.

Bg3—61 to 72 inches; grayish brown (10YR 5/2) silty clay loam; weak fine prismatic structure; firm; very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films on vertical faces of peds; many fine and medium distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine and medium irregular very dark brown (7.5YR 2.5/2) and strong brown (7.5YR 4/6) masses of iron-manganese accumulation; slightly acid; clear smooth boundary.

BCg—72 to 80 inches; grayish brown (10YR 5/2) silty clay loam; weak medium prismatic structure; firm; few very fine roots; few faint dark grayish brown (10YR 4/2) clay films on vertical faces of peds and in pores and root channels; common fine and medium faint brown (10YR 4/3) and few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine and medium irregular black (7.5YR 2.5/1) masses of iron-manganese accumulation; slightly acid.

Range in Characteristics

Depth to the base of soil development: 30 to more than 80 inches

Thickness of the mollic epipedon: 10 to 24 inches

Particle-size control section: Average of 22 to 35 percent clay and less than 15 percent sand

Other characteristics: Some pedons have an AB or BA horizon

Ap or A horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—silty clay loam

Bw and Bg horizons:

Hue—dominantly 10YR or 2.5Y; 5Y below a depth of 50 inches in some pedons

Value—4 or 5

Chroma—dominantly 2 to 4; 1 below a depth of 50 inches in some pedons

Texture—silty clay loam or silt loam

BC or BCg horizon (if it occurs):

Hue—10YR, 2.5Y, or 5Y

Value—4 or 5

Chroma—1 to 4

Texture—typically silty clay loam or silt loam; stratified loam, clay loam, or sandy loam in some pedons

C or Cg horizon (if it occurs):

Hue—10YR, 2.5Y, or 5Y

Value—4 to 6

Chroma—1 to 3

Texture—stratified silty clay loam, clay loam, loam, sandy loam, or silt loam

Wakeland Series

Taxonomic Classification: Coarse-silty, mixed, superactive, nonacid, mesic Aeric Fluvaquents

Typical Pedon

Wakeland silt loam; in Madison County, Illinois; in a nearly level area in a cultivated

field, at an elevation of about 485 feet above mean sea level, approximately 2 miles northeast of Highland, about 1,600 feet north and 1,330 feet east of the center of sec. 34, T. 4 N., R. 5 W.; USGS Grantfork, Illinois topographic quadrangle; lat. 38 degrees 45 minutes 18 seconds N. and long. 89 degrees 38 minutes 27 seconds W.; UTM Zone 16, Easting 270517, Northing 4292906, NAD 83:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; very thin lenses of light gray (10YR 7/1) silt and very fine sand; weak fine granular structure; friable; many very fine and few fine roots; few fine continuous tubular pores; neutral; clear smooth boundary.

Cg1—8 to 34 inches; dark grayish brown (10YR 4/2) silt loam; thin lenses of light brownish gray (10YR 6/2) silt and very fine sand; massive; friable; few very fine roots; common very fine and fine continuous tubular pores; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; neutral; gradual smooth boundary.

Cg2—34 to 44 inches; dark grayish brown (10YR 4/2) silt loam; massive; friable; few very fine roots; few very fine continuous tubular pores; common medium faint light brownish gray (10YR 6/2) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

Cg3—44 to 68 inches; brown (10YR 5/2) silt loam; massive; friable; common medium faint dark grayish brown (10YR 4/2) and light brownish gray (10YR 6/2) iron depletions and common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few medium rounded dark brown (7.5YR 3/2) masses of iron-manganese nodules; slightly acid; clear smooth boundary.

Ab—68 to 80 inches; very dark grayish brown (10YR 3/2) silt loam; moderate fine subangular blocky structure; friable; few fine rounded black (10YR 2/1) iron-manganese nodules; slightly acid.

Range in Characteristics

Particle-size control section: Average of 10 to 18 percent clay and less than 15 percent fine sand or coarser material

Depth to a buried soil (if it occurs): More than 60 inches

Ap horizon:

Hue—10YR

Value—4 or 5

Chroma—2 to 4

Texture—silt loam

A horizon (if it occurs):

Hue—10YR

Value—3 or 4

Chroma—1

Texture—silt loam

Thickness—1 to 3 inches

C or Cg horizon (upper part):

Hue—10YR or 7.5YR

Value—4 to 6

Chroma—1 to 4

Texture—silt loam

C or Cg horizon (lower part):

Hue—10YR or 2.5Y

Value—4 to 7

Chroma—1 to 6

Texture—silt loam; loam and thin strata of fine sandy loam or sandy loam occur below a depth of 40 inches

Ab horizon:

Hue—10YR

Value—4 or 5

Chroma—2 to 4

Texture—silt loam

Ware Series

Taxonomic Classification: Coarse-loamy, mixed, active, thermic Fluventic Hapludolls

Typical Pedon

Ware loam; in Jackson County, Illinois; in a nearly level to undulating area in a cultivated field, at an elevation of about 357 feet above mean sea level, approximately $\frac{1}{4}$ mile southeast of Neunert, about 660 feet south and 690 feet east of the northwest corner of sec. 27, T. 9 S., R. 4 W.; USGS Altenburg, Missouri-Illinois topographic quadrangle; lat. 37 degrees 43 minutes 15 seconds N. and long. 89 degrees 32 minutes 35 seconds W.; UTM Zone 16, Easting 275860, Northing 4177875, NAD 83:

- Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; common roots; moderately acid; abrupt smooth boundary.
- A1—7 to 11 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak medium granular structure; friable; few roots; slightly acid; clear smooth boundary.
- A2—11 to 14 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak coarse granular structure; friable; few roots; slightly acid; clear smooth boundary.
- Bw—14 to 21 inches; brown (10YR 4/3) and very dark grayish brown (10YR 3/2) very fine sandy loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; very friable; few roots; slightly acid; clear smooth boundary.
- C1—21 to 30 inches; stratified yellowish brown (10YR 5/4) loamy very fine sand and brown (10YR 4/3) and very dark grayish brown (10YR 3/2) very fine sandy loam; single grain; very friable; few roots; neutral; clear smooth boundary.
- C2—30 to 38 inches; yellowish brown (10YR 5/4) and brown (10YR 4/3) very fine sandy loam; massive; very friable; few dark brown (10YR 3/3) lenses; neutral; gradual smooth boundary.
- C3—38 to 54 inches; yellowish brown (10YR 5/4) very fine sandy loam; massive; very friable; few dark brown (10YR 3/3) lenses in upper 6 inches of horizon and pale brown (10YR 6/3) streaks in lower part; neutral; clear smooth boundary.
- C4—54 to 80 inches; grayish brown (10YR 5/2), dark yellowish brown (10YR 4/4), and yellowish brown (10YR 5/6) very fine sandy loam; massive; very friable; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 23 inches

Thickness of the solum: 15 to 30 inches

Organic carbon distribution: Irregular decrease of organic matter between depths of 10 and 50 inches

A or Ap horizon:

Hue—10YR

Value—2 or 3

Chroma—1 or 2

Texture—loam, silt loam, or very fine sandy loam

Bw horizon:

Hue—10YR

Value—3 to 5

Chroma—typically 3 or 4; 2 in some pedons that have been deeply tilled

Texture—loam or very fine sandy loam; horizon is stratified with coarser or finer textured strata in some pedons

C horizon:

Hue—10YR

Value—4 to 6

Chroma—2 to 4

Texture—dominantly very fine sandy loam to fine sand; ranging from silt loam to sand; horizon is stratified in many pedons

Wheeling Series

Taxonomic Classification: Fine-loamy, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Wheeling silt loam, eroded; in Massac County, Illinois; in a gently sloping wooded area, at an elevation of about 341 feet above mean sea level, approximately 170 feet north of the north end of a bridge and 105 feet west of the center line of a blacktop road in the NE1/4 SE1/4 NE1/4 SW1/4 of sec. 32, T. 14 S., R. 4 E.; USGS Mermet, Illinois topographic quadrangle; lat. 37 degrees 15 minutes 20 seconds N. and long. 88 degrees 47 minutes 39 seconds W.; UTM 16, Easting 340886, Northing 4124732, NAD 83:

Ap—0 to 5 inches; dark brown (10YR 3/3) silt loam, very dark grayish brown (10YR 3/2) crushed and brown (10YR 5/3) dry; moderate fine granular structure; friable; many roots; strongly acid; abrupt smooth boundary.

E—5 to 7 inches; yellowish brown (10YR 5/4) silt loam; weak fine granular structure; friable; many roots; moderately acid; clear smooth boundary.

BE—7 to 10 inches; yellowish brown (10YR 5/4) silt loam to loam; weak fine subangular blocky structure; friable; many roots; common very fine and fine pores; few faint brown (7.5YR 4/4) clay films in root and worm channels; strongly acid; clear smooth boundary.

Bt1—10 to 23 inches; brown (7.5YR 4/4) clay loam; strong fine and medium prismatic structure parting to strong fine and medium angular blocky; friable; common roots; common faint brown (7.5YR 4/4) clay films on faces of peds; few very fine black (N 2/0) iron-manganese stains; strongly acid; clear smooth boundary.

Bt2—23 to 30 inches; brown (7.5YR 4/4) clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common roots; few very fine pores; many faint brown (7.5YR 4/4) clay films on faces of peds; few very fine black (N 2/0) iron-manganese stains; strongly acid; clear smooth boundary.

Bt3—30 to 38 inches; brown (7.5YR 4/4) sandy clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few roots; few very fine pores; common faint brown (7.5YR 4/4) clay films on faces of peds; few very fine black (N 2/0) iron-manganese stains that are 1 to 2 inches in diameter; strongly acid; clear smooth boundary.

BC—38 to 49 inches; brown (7.5YR 4/4) sandy clay loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few roots; few very fine pores; few faint brown (7.5YR 4/4) clay films on faces of peds; few fine distinct light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; clear smooth boundary.

C—49 to 80 inches; brown (7.5YR 4/4) sandy loam; massive; friable; strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches or more

Rock fragments: 0 to 35 percent

Particle-size control section: 18 to 30 percent clay; in some areas there are noticeable mica flakes throughout the profile

Reaction: Strongly acid or moderately acid throughout the profile in unlimed pedons

Ap or A horizon:

Hue—10YR or 7.5YR

Value—3 to 5

Chroma—2 to 4

Texture—fine sandy loam, sandy loam, loam, or silt loam

E horizon:

Hue—10YR or 7.5YR

Value—5 or 6

Chroma—2 to 4

Texture—fine sandy loam, sandy loam, loam, or silt loam

BE horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—commonly loam or silt loam; less commonly fine sandy loam or sandy loam

Bt horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—loam, silt loam, clay loam, or silty clay loam

BC horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—very fine sandy loam or sandy loam

C horizon:

Hue—10YR or 7.5YR

Value—4 or 5

Chroma—3 to 6

Texture—stratified in textures of sandy loam, fine sandy loam, loamy sand, or loamy fine sand

Winfield Series

Taxonomic Classification: Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

Typical Pedon

Winfield silt loam; in St. Clair County, Illinois; on a south-facing slope, in a cultivated field, at an elevation of about 540 feet above mean sea level, approximately 3 miles north of O'Fallon, about 205 feet east and 610 feet south of the northwest corner of sec. 9, T. 2 N., R. 7 W.; USGS Collinsville, Illinois topographic quadrangle; lat. 38 degrees 38 minutes 32 seconds N. and long. 89 degrees 53 minutes 27 seconds W.; UTM Zone 16, Easting 248394, Northing 4280830, NAD 83:

- Ap—0 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; many very fine roots; about 22 percent clay; neutral; abrupt smooth boundary.
- E—9 to 13 inches; brown (10YR 5/3) silt loam, pale brown (10YR 6/3) dry; weak medium platy structure parting to moderate very fine subangular blocky; friable; common very fine roots; few faint light gray (10YR 7/2, dry) clay depletions on faces of peds; few fine rounded black (10YR 2/1) iron-manganese nodules with sharp boundaries; about 25 percent clay; moderately acid; clear smooth boundary.
- Bt1—13 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; firm; common very fine roots; few distinct light gray (10YR 7/2, dry) clay depletions along root channels; many distinct brown (10YR 4/3) clay films on faces of peds; common fine and medium rounded black (10YR 2/1) iron-manganese nodules with sharp strong brown (7.5YR 4/6) boundaries; about 33 percent clay; moderately acid; clear smooth boundary.
- Bt2—21 to 30 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; common very fine roots; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct light brownish gray (10YR 6/2) iron depletions and few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine rounded black (10YR 2/1) iron-manganese nodules with sharp strong brown (7.5YR 4/6) boundaries; about 32 percent clay; strongly acid; gradual smooth boundary.
- Btg1—30 to 40 inches; light brownish gray (10YR 6/2) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine and medium distinct yellowish brown (10YR 5/4) and few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium irregular black (10YR 2/1) masses of iron-manganese accumulation with clear strong brown (7.5YR 4/6) boundaries; about 30 percent clay; moderately acid; clear smooth boundary.
- Btg2—40 to 56 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium prismatic structure parting to weak medium and coarse subangular blocky; firm; few very fine roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many medium and coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium irregular black (10YR 2/1) masses of iron-manganese accumulation with clear strong brown (7.5YR 4/6) boundaries; about 28 percent clay; moderately acid; clear smooth boundary.
- Btg3—56 to 62 inches; light brownish gray (2.5Y 6/2) silt loam; weak medium angular blocky structure; friable; few very fine roots; few faint brown (10YR 5/3) clay films on faces of peds; common fine and medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; common medium irregular black (10YR 2/1) masses of iron-manganese accumulation with diffuse strong brown (7.5YR 5/6) boundaries; about 25 percent clay; slightly acid; gradual smooth boundary.
- Cg—62 to 80 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; common medium and coarse prominent strong brown (7.5YR 4/6) and few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common

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medium and coarse irregular black (10YR 2/1) masses of iron-manganese accumulation with diffuse strong brown (7.5YR 5/6) boundaries; about 20 percent clay; neutral.

Range in Characteristics

Depth to the base of the argillic horizon: 35 to 65 inches

Thickness of loess: 80 inches or more

Particle-size control section: 27 to 35 percent clay; less than 7 percent sand

Ap or A horizon:

Hue—10YR

Value—3 to 5

Chroma—2 or 3

Texture—silt loam

E horizon:

Hue—10YR

Value—4 to 6 (6 to 8 dry)

Chroma—2 to 4

Texture—silt loam

BE horizon (if it occurs):

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—3 or 4

Texture—silt loam or silty clay loam

Bt horizon (upper part):

Hue—7.5YR or 10YR

Value—4 or 5

Chroma—3 to 6

Texture—silty clay loam

Bt horizon (lower part) and Btg horizon:

Hue—7.5YR, 10YR, or 2.5Y

Value—4 to 6

Chroma—1 to 6

Texture—silt loam or silty clay loam

C or Cg horizon:

Hue—10YR or 2.5Y

Value—4 to 6

Chroma—1 to 4

Texture—silt loam

Formation of the Soils

This section relates the soils in the survey area to the major factors of soil formation and describes the processes of soil formation.

Factors of Soil Formation

Soil is a three-dimensional natural body consisting of mineral and organic material that can support plant growth. The nature of any soil at a given site is the result of the interaction of the factors of soil formation and their influence on the process of soil formation.

The following paragraphs describe the factors of soil formation and their effect on the soils in Alexander County. Soil-forming processes act on deposited or accumulated geologic material. They slowly change the material into a soil. The characteristics of the soil at any given point are determined by (1) the physical and mineralogical composition of the parent material; (2) the plant and animal life on and in the soil; (3) the topography, or lay of the land; (4) the climate under which the soil material has accumulated and existed since accumulation; and (5) the length of time that the forces of soil formation have acted on the soil material (6).

Climate and plants and animals act directly on parent material, which is modified by topography over time. Theoretically, if all the soil-forming factors were identical at different sites, the soils at these sites would be identical. The variation that exists among soils is the result of unique combinations of the soil-forming factors. Soils are continually evolving in response to these factors.

Parent Material

Parent material is derived mainly from the weathering of rock, but it may have been sorted and moved from place to place by glaciers, wind, and water. The soils of Alexander County formed mostly in alluvium (such as Petrolia and Karnak soils); lakebed sediments (such as Hurst and Colp soils), which are deposited by water; and loess (such as Menfro and Stookey soils), which is deposited by wind. A few soils, such as Clarksville, have formed partially in residuum weathered from the underlying rock.

Most of the soils in the county are on terraces and bottom lands. The soils developed mainly in old alluvium on terraces and in recent alluvium on bottom lands. The texture of the alluvium ranges from sand or loamy sand to silty clay or clay.

The soils on uplands formed mainly in loess, or windblown silt. The thickness of the loess on upland ridgetops and in level and nearly level upland areas ranges from more than 300 inches to about 200 inches. The large Pleistocene alluvial plain, which included the Mississippi River valley and the old Ohio River valley now occupied by the Cache River, is thought to be the main source of the loess deposits in the county. In some places there are three layers of loess—Peoria loess over Roxana loess over Loveland loess. In many places, however, the lowest layer (Loveland loess) and the soil that formed in it were removed by erosion before new material was deposited.

Where the Loveland loess occurs, it overlies bedrock residuum, bedrock, or Coastal Plain gravel. The second layer (Farmdale or Roxana loess) generally makes up a third to a half of the total thickness of the loess. The uppermost layer (Peorian loess) ordinarily is the thickest and is the material in which the present-day soils developed.

Clarksville soils developed in thin deposits of loess over cherty material, which in some places occurs as residuum weathered from cherty limestone but in most places occurs as thick beds of relatively pure chert. In some places, soils associated with the Clarksville soils developed in loess over Coastal Plain gravel.

On the uplands in Alexander County, there is a general relationship between the thickness of the loess and the degree of soil development. For example, Stookey, Menfro, and Winfield soils formed, for the most part, in thicker deposits of loess than the more developed Stoy soils. Hosmer soils formed in thinner loess deposits on summits, shoulders, and backslopes. The higher degree of development of Hosmer soils in these areas may be due to lateral seepage and the consequent higher moisture content rather than due to the thickness of the loess. The formation of a fragipan in some of the loess soils on uplands, particularly in Hosmer soils, is thought to be related to the texture of the parent material, the stage of development, and the presence of a temporary or perched water table.

Climate and Vegetation

Climate largely determines the rate of weathering, and it also influences the type of vegetation that grows on soils. The humid temperate climate of Alexander County is conducive to the relatively rapid breakdown of minerals, to the formation of clay, and to the translocation of these materials downward in the soil profile. It is also conducive to the growth of deciduous forest, which for a significant period prior to settlement covered all of the uplands and most of the terraces and bottom lands in the survey area. As a result, most of the soils have a relatively light-colored surface horizon. Examples of these soils are Menfro and Sciotoville. Ware soils on terraces and Cairo soils on the bottom lands are examples of soils that formed predominantly under grass vegetation. Riley and Armiesburg soils on terraces are examples of soils that probably were influenced by grass to some extent in their formation and probably developed under mixed stands of grass and forest.

Relief

Under given climatic conditions and in uniform parent material, relief largely controls the amount of moisture in the soil. It influences the amount of runoff, the amount of infiltration, and the degree of erosion. In uniform materials, such as loess, differences in natural soil drainage generally are closely associated with slope, or relief. Examples are the well drained Menfro soils and the moderately well drained Winfield soils, both of which formed in thick loess and are commonly adjacent on the landscape.

On steeper slopes, where the potential for surface runoff is high, soils tend to be thinner and their horizons generally are not as strongly expressed. An example is the well drained Stookey soils.

Time

The length of time necessary for a soil to develop depends on the other factors of soil formation. Soil development generally is faster in a humid climate that supports good vegetation than in a dry climate that supports little vegetation. Soils normally become more strongly developed the more time they are exposed to the weathering processes. Sharon soils on bottom lands are an example of weakly developed soils. Clarksville soils on upland side slopes are an example of strongly developed soils.

Processes of Soil Formation

Soil forms through the complex interaction of four general processes (12). These processes are additions, transformations, removals, and transfers. The degree of interaction of each of these processes in soil formation varies, resulting in the variety of soils seen on the landscape.

Additions to the soil can occur directly through the deposition of sediment to the soil surface from flooding or through the accumulation of windblown sediment. The accumulation and incorporation of organic matter in the A horizon of mineral soils is also an addition. The most striking example of this addition is the formation of the mollic epipedon. The mollic epipedon forms in an environment that features optimum amounts of moisture and bivalent cations and optimum temperatures. Such an environment allows grasses to thrive. The grassland vegetation produces large amounts of organic matter. Microbial decomposition of subsurface organic residues and organic residues from the surface moved underground by soil fauna results in the most recognizable property of the mollic epipedon—its dark color. Darwin soils are examples of soils that have a mollic epipedon.

Transformations are changes that take place in the soil through the interaction of biological, chemical, and physical processes. An example is the reduction of iron and manganese oxides, which occurs in soils saturated with water. Typically, iron oxides coat soil particles and produce brownish, yellowish, or reddish colors and manganese oxides produce black colors. When a soil becomes saturated with water and the dissolved oxygen is removed, anaerobic conditions develop. These conditions result in changes in the biogeochemical processes occurring in the soils and in the development of distinctive soil morphological characteristics (redoximorphic features). Reduced iron and manganese can move with the soil water to other parts of the soil or can be removed entirely from the soil through leaching. After the iron and manganese are removed, the leached area, or depletion, generally has a grayish or whitish color. If the reduced iron comes in contact with oxygen, it can reoxidize. The result is the formation of bright-colored concentrations or accumulations. Repeated cycles of saturation and drying create a mottled soil. Part of the soil is gray because of the loss of iron, and other parts are brown because the iron oxide has accumulated or has not been removed. The somewhat poorly drained Stoy soils are examples of soils in which this process has occurred. If a soil remains saturated for long periods, iron may be leached from the soil. Such soils are generally grayish, or gleyed. The poorly drained Cape soils are an example.

Removals from the soil can occur as solid mineral and organic particles are lost through erosion from the soil surface. Such losses can be serious because the material lost is typically the most productive part of the soil profile. The strongly sloping Menfro, Hosmer, and Winfield soils are examples of soils that are highly susceptible to removals by soil erosion.

Removals can also occur within the soil, commonly as a result of leaching. The leaching of calcium carbonate from calcareous loess is an example of a removal. The loess was initially high in calcium carbonate. Water percolating through the loess dissolved and transported the calcium carbonate deeper into the solum. Calcium carbonate is relatively soluble and is removed early in the formation of the soil. It is also a powerful flocculent, creating microscopic soil particles too large to be transported in suspension in the soil water. Removal of calcium carbonate facilitates the dispersion of clay particles. Translocation of the dispersed clay particles can then occur in percolating soil water. Zanesville and Westmore soils are examples of soils that have had significant removals from leaching.

Translocations are movements from one place to another in the soil. An example is the formation of an illuvial horizon through the translocation of clay from the A or E horizon (the zone of eluviation or loss) to the B horizon (the zone of illuviation or gain).

In Menfro and Hosmer soils, for example, significant clay has accumulated, forming an illuvial horizon called an argillic horizon. The argillic horizon tends to develop on stable landscapes. Fine clay was transferred from the A or E horizon by water from rain and melting snow downward through the soil to the B horizon, where it was deposited on the faces of peds and along pores.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having an A and a C horizon.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soils. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

- Bedding planes.** Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.
- Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
- Bisequum.** Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.
- Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.
- Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
- Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
- Catena.** A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.
- Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
- Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
- Channery soil material.** Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.
- Chemical treatment.** Control of unwanted vegetation through the use of chemicals.
- Chiseling.** Tillage with an implement having one or more soil-penetrating points that loosen the subsoil and bring clods to the surface.
- Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay depletions.** Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.
- Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- Climax plant community.** The plant community on a given site that can be established if present environmental conditions continue to prevail and the site is properly managed.
- Coarse textured soil.** Sand or loamy sand.
- Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- Cobbly soil material.** Material that is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material is 35 to 60 percent of these rock fragments, and extremely cobbly soil material is more than 60 percent.
- COLE (coefficient of linear extensibility).** See Linear extensibility.
- Colluvium.** Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.
- Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
- Complex soil.** A map unit of two or more kinds of soil or miscellaneous areas in such

an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrated compounds or cemented soil grains. The composition of most concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are common compounds in concretions.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. Any tillage and planting system in which a cover of crop residue is maintained on at least 30 percent of the surface after planting in order to reduce the hazard of water erosion; in areas where wind erosion is the primary concern, a system that maintains a cover of at least 1,000 pounds of flat residue of small grain or its equivalent during the critical erosion period.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Corrosive. High risk of corrosion to uncoated steel or deterioration of concrete.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression. Any relatively sunken part of the earth's surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage. An open depression has a natural outlet for surface drainage.

Depth, soil. The thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep soils, 20 to 40 inches; shallow soils, 10 to 20 inches; and very shallow soils, less than 10 inches.

Depth to bedrock (in tables). Bedrock is too near the surface for the specified use.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:

Excessively drained.—These soils have very high and high hydraulic conductivity and a low water-holding capacity. They are not suited to crop production unless irrigated.

Somewhat excessively drained.—These soils have high hydraulic conductivity and a low water-holding capacity. Without irrigation, only a narrow range of crops can be grown and yields are low.

Well drained.—These soils have an intermediate or high water-holding capacity. They retain optimum amounts of moisture, but they are not wet close enough to the surface or long enough during the growing season to adversely affect yields.

Moderately well drained.—These soils are wet close enough to the surface or long enough that planting or harvesting operations or yields of most field crops are affected. Moderately well drained soils commonly have a layer with low hydraulic conductivity, a wet layer relatively high in the profile, additions of water by seepage, or some combination of these.

Somewhat poorly drained.—These soils are wet close enough to the surface or long enough that planting or harvesting operations or crop growth is markedly restricted under natural conditions. Somewhat poorly drained soils commonly have a layer with low hydraulic conductivity, a wet layer high in the profile, additions of water through seepage, or a combination of these.

Poorly drained.—These soils commonly are so wet at or near the surface during a considerable part of the year that field crops cannot be grown under natural conditions. Poor drainage is caused by a saturated zone, a layer with low hydraulic conductivity, seepage, or a combination of these.

Very poorly drained.—These soils are wet to the surface most of the time. The wetness prevents the growth of important crops under natural conditions.

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A relatively small, linear depression that, at some time, moves concentrated water and either does not have a defined channel or has a small, defined channel.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above a zone in which the soil moisture status is wet at all times.

Episaturation. A type of saturation indicating a perched zone in which the soil moisture status is wet in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. The term is more often applied to cliffs resulting from differential erosion.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called normal field capacity, normal moisture capacity, or capillary capacity.

Fine textured soil. Sandy clay, silty clay, or clay.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that is, by volume, 15 to 35 percent flagstones. Very flaggy soil material is 35 to 60 percent flagstones, and extremely flaggy soil material is more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to inundation under flood-stage conditions unless protected artificially. It is generally a constructional landform consisting of sediment deposited during overflow and lateral migration of the stream.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest habitat type. An association of dominant tree and ground flora species in a climax community.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geomorphology. The science that treats the general configuration of the earth's surface; specifically the study of the classification, description, nature, origin, and development of landforms and their relationships to underlying structures and the history of geologic changes as recorded by these surface features. The term is especially applied to the genetic interpretation of landforms.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Grassed waterway. A natural or constructed waterway, typically broad and shallow,

seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 50 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of underlying material below the top of where the soil moisture status is wet.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

High-chroma zones. Zones having chroma of 3 or more (the typical color in areas of iron concentrations).

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 6 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff-producing characteristics. The chief consideration is the inherent capacity of soil bare of vegetation to permit infiltration. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff. Soils are assigned to four groups. In group A, soils have a high infiltration rate when thoroughly wet and have a low runoff potential. They are mainly deep, well drained, and sandy or gravelly. In group D, at the other extreme, soils have a very slow infiltration rate and thus a high runoff potential. They have a claypan or clay layer at or near the surface, have a zone with wet soil moisture status high in the profile on a permanent basis, or are shallow over nearly impervious bedrock or other material. A soil is assigned to two hydrologic groups if part of the acreage is artificially drained and part is undrained.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron concentrations. High-chroma zones having a high content of iron and manganese oxide because of chemical oxidation and accumulation, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic concentration.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. The controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock. The performance of a system is affected by the depth of the root zone, the formation of plow pans, the intake rate, and soil reaction.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $\frac{1}{3}$ -bar or $\frac{1}{10}$ -bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine-grained material, dominantly of silt-sized particles, deposited by the wind.

Low-chroma zones. Zones having chroma of 2 or less (the typical color in areas of iron depletions).

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

MAP. Mean annual precipitation, expressed in inches.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Parent material. The unconsolidated organic and mineral material in which soil forms.

Parts per million (ppm). The concentration of a substance in the soil, such as phosphorus or potassium, in one million parts of air-dried soil on a weight per weight basis.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher areas of the erosion surface.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a

measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and thickness.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse-grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Burning an area under conditions of weather and soil moisture and at the time of day that will result in the intensity of heat and spread required to accomplish specific forest management, wildlife, grazing, or fire hazard reduction purposes.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0

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Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Rise. A slight increase in elevation of the land surface, typically with a broad summit and gently sloping sides.

Riser. The relatively short, steeply sloping area below a terrace tread that grades to a lower terrace tread or a base level.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop. Exposures of bare bedrock other than rock-lined pits.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments ranging from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sawtimber. Hardwood trees more than 11 inches in diameter and conifers more than 9 inches in diameter at breast height.

- Second bottom.** The first terrace above the normal flood plain (or first bottom) of a river.
- Sedimentary rock.** Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.
- Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
- Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
- Shale.** Sedimentary rock formed by the hardening of a clay deposit.
- Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
- Shoulder.** The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.
- Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
- Side slope.** A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.
- Silica.** A combination of silicon and oxygen. The mineral form is called quartz.
- Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.
- Siltstone.** Sedimentary rock made up of dominantly silt-sized particles.
- Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.
- Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.
- Slick spot.** A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.
- Slickensides.** Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.
- Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.
- Slow refill** (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.
- Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.
- Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the substratum. The living roots and plant and animal activities are largely confined to the solum.

Sprinkler irrigation. A method of irrigation in which water is pumped through nozzles and sprayed, or sprinkled, through the air to the ground surface.

Stone line. A concentration of rock fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), blocky (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter or loosen a layer that restricts roots.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Swale. A slight depression in the midst of generally level land; a shallow depression in an undulating ground moraine due to uneven glacial deposition.

- Taxadjuncts.** Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior.
- Terrace.** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field is generally built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
- Terrace (geologic).** An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.
- Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."
- Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.
- Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
- Toeslope.** The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
- Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
- Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
- Tread.** The relatively flat terrace surface that was cut or built by stream or wave action.
- Upland (geology).** Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.
- Valley fill.** In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.
- Variegation.** Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.
- Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.
- Weathering.** All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.
- Well graded.** Refers to soil material consisting of coarse-grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.
- Wilting point (or permanent wilting point).** The moisture content of soil, on an oven-dry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.
- Windthrow.** The uprooting and tipping over of trees by the wind.

Tables

Soil Survey of Alexander County, Illinois

Table 1.--Temperature and Precipitation
(Recorded in the period 1971-2000 at Anna, Illinois)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more	Average snow- fall
				Maximum temp. higher than--	Minimum temp. lower than--			Less than--	More than--		
	°F	°F	°F	°F	°F	Units	In	In	In		In
January--	41.1	23.7	32.4	67	-6	8	3.59	1.65	5.10	6	4.8
February--	47.7	27.8	37.8	73	0	21	3.42	2.84	4.81	5	4.2
March----	58.0	36.5	47.2	80	13	88	4.73	3.01	6.31	7	1.9
April----	68.3	45.8	57.1	86	25	245	4.69	2.83	6.38	7	0.1
May-----	77.0	54.9	66.0	90	37	492	5.16	2.67	7.26	7	0.0
June-----	85.2	63.4	74.3	96	47	728	4.23	2.14	6.15	6	0.0
July-----	88.8	67.6	78.2	99	54	872	3.26	1.42	5.11	5	0.0
August---	87.8	65.5	76.7	99	52	823	3.58	1.22	5.69	4	0.0
September	80.8	58.1	69.4	95	38	578	3.13	1.24	4.84	4	0.0
October--	70.5	46.5	58.5	86	27	282	3.34	1.55	4.97	5	0.1
November--	56.8	37.4	47.1	78	15	84	4.76	2.44	7.03	6	0.5
December--	45.1	27.9	36.5	68	-1	16	4.29	2.11	6.19	6	2.5
Yearly: Average	67.3	46.3	56.8	---	---	---	---	---	---	---	---
Extreme	107	-17	---	100	-9	---	---	---	---	---	---
Total--	---	---	---	---	---	4,239	48.17	40.81	55.44	68	14.2

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Soil Survey of Alexander County, Illinois

Table 2.—Freeze Dates in Spring and Fall
(Recorded in the period 1971-2000 at Anna, Illinois)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 6	Apr. 13	Apr. 23
2 years in 10 later than--	Apr. 31	Apr. 8	Apr. 19
5 years in 10 later than--	Mar. 18	Mar. 29	Apr. 9
First freezing temperature in fall:			
1 year in 10 earlier than--	Nov. 1	Oct. 20	Oct. 6
2 years in 10 earlier than--	Nov. 6	Oct. 26	Oct. 12
5 years in 10 earlier than-	Nov. 17	Nov. 6	Oct. 22

Table 3.—Growing Season
(Recorded in the period 1971-2000 at Anna, Illinois)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<u>Days</u>	<u>Days</u>	<u>Days</u>
9 years in 10	219	196	177
8 years in 10	227	205	183
5 years in 10	242	221	195
2 years in 10	257	238	206
1 year in 10	265	246	212

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Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
75C	Drury silt loam, 5 to 10 percent slopes-----	747	0.5
75C3	Drury silt loam, 5 to 10 percent slopes, severely eroded-----	33	*
75D	Drury silt loam, 10 to 18 percent slopes-----	2,986	1.8
79B	Menfro silt loam, 2 to 5 percent slopes-----	171	0.1
79C	Menfro silt loam, 5 to 10 percent slopes-----	790	0.5
79C2	Menfro silt loam, 5 to 10 percent slopes, eroded-----	2,121	1.3
79C3	Menfro silt loam, 5 to 10 percent slopes, severely eroded-----	92	*
79D	Menfro silt loam, 10 to 18 percent slopes-----	2,601	1.6
79D2	Menfro silt loam, 10 to 18 percent slopes, eroded-----	1,803	1.1
79D3	Menfro silt loam, 10 to 18 percent slopes, severely eroded-----	598	0.4
79E	Menfro silt loam, 18 to 25 percent slopes-----	138	*
79E2	Menfro silt loam, 18 to 25 percent slopes, eroded-----	266	0.2
79E3	Menfro silt loam, 18 to 25 percent slopes, severely eroded-----	425	0.3
79F	Menfro silt loam, 25 to 35 percent slopes-----	239	0.1
164B	Stoy silt loam, 2 to 5 percent slopes-----	22	*
175A	Lamont fine sandy loam, 0 to 2 percent slopes-----	193	0.1
175B	Lamont fine sandy loam, 2 to 5 percent slopes-----	348	0.2
175C	Lamont fine sandy loam, 5 to 10 percent slopes, eroded-----	23	*
214B	Hosmer silt loam, 2 to 5 percent slopes-----	98	*
214C	Hosmer silt loam, 5 to 10 percent slopes-----	91	*
214C2	Hosmer silt loam, 5 to 10 percent slopes, eroded-----	442	0.3
214C3	Hosmer silt loam, 5 to 10 percent slopes, severely eroded-----	228	0.1
214D2	Hosmer silt loam, 10 to 18 percent slopes, eroded-----	805	0.5
214D3	Hosmer silt loam, 10 to 18 percent slopes, severely eroded-----	757	0.5
216D	Stookey silt loam, 10 to 18 percent slopes-----	473	0.3
216D2	Stookey silt loam, 10 to 18 percent slopes, eroded-----	740	0.5
216E	Stookey silt loam, 18 to 25 percent slopes-----	1,629	1.0
216E2	Stookey silt loam, 18 to 25 percent slopes, eroded-----	412	0.3
216E3	Stookey silt loam, 18 to 25 percent slopes, severely eroded-----	985	0.6
216F	Stookey silt loam, 25 to 35 percent slopes-----	6,352	3.9
216G	Stookey silt loam, 35 to 70 percent slopes-----	1,801	1.1
471F	Clarksville gravelly silt loam, 25 to 35 percent slopes-----	1,079	0.7
471G	Clarksville gravelly silt loam, 35 to 70 percent slopes-----	924	0.6
477B	Winfield silt loam, 2 to 5 percent slopes-----	1	*
477C	Winfield silt loam, 5 to 10 percent slopes-----	105	*
477C2	Winfield silt loam, 5 to 10 percent slopes, eroded-----	353	0.2
477C3	Winfield silt loam, 5 to 10 percent slopes, severely eroded-----	19	*
477D2	Winfield silt loam, 10 to 18 percent slopes, eroded-----	371	0.2
477D3	Winfield silt loam, 10 to 18 percent slopes, severely eroded-----	415	0.3
477E3	Winfield silt loam, 18 to 25 percent slopes, severely eroded-----	495	0.3
477F	Winfield silt loam, 25 to 35 percent slopes-----	62	*
717F	Stookey-Clarksville complex, 18 to 35 percent slopes-----	10,610	6.5
717G	Clarksville-Stookey complex, 35 to 70 percent slopes-----	3,258	2.0
801B	Orthents, silty, undulating-----	1,493	0.9
802D	Orthents, loamy, hilly-----	1,167	0.7
832F	Menfro-Clarksville complex, 18 to 35 percent slopes-----	1,794	1.1
832G	Clarksville-Menfro complex, 35 to 70 percent slopes-----	564	0.3
833F	Menfro-Goss complex, 18 to 35 percent slopes-----	1,273	0.8
833G	Goss-Menfro complex, 35 to 70 percent slopes-----	914	0.6
864	Pits, quarries-----	93	*
865	Pits, gravel-----	3	*
1426A	Karnak silty clay, undrained, 0 to 2 percent slopes, frequently flooded-----	15	*
1843A	Bonnie and Petrolia soils, undrained, 0 to 2 percent slopes, frequently flooded-----	786	0.5
1845A	Darwin and Jacob silty clays, undrained, 0 to 2 percent slopes, frequently flooded-----	2,604	1.6
1846A	Karnak and Cape silty clays, undrained, 0 to 2 percent slopes, frequently flooded-----	2,992	1.8
3070L	Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration-----	1,381	0.8
3071A	Darwin silty clay, 0 to 2 percent slopes, frequently flooded-----	42	*
3071L	Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration----	4,035	2.5

See footnote at end of table.

Soil Survey of Alexander County, Illinois

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
3092BL	Sarpy fine sand, 1 to 8 percent slopes, frequently flooded, long duration-----	304	0.2
3108A	Bonnie silt loam, 0 to 2 percent slopes, frequently flooded-----	140	*
3162L	Gorham silty clay loam, 0 to 3 percent slopes, frequently flooded, long duration-----	2,194	1.3
3180L	Dupo silt loam, 0 to 2 percent slopes, frequently flooded, long duration-----	1,210	0.7
3284L	Tice silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration-----	1,659	1.0
3288L	Petrolia silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration-----	132	*
3331A	Haymond silt loam, 0 to 3 percent slopes, frequently flooded-----	266	0.2
3331L	Haymond silt loam, 0 to 3 percent slopes, frequently flooded, long duration----	45	*
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded-----	95	*
3333L	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration---	213	0.1
3334A	Birds silt loam, 0 to 2 percent slopes, frequently flooded-----	3	*
3334L	Birds silt loam, 0 to 2 percent slopes, frequently flooded, long duration-----	764	0.5
3382A	Belknap silt loam, 0 to 2 percent slopes, frequently flooded-----	127	*
3420A	Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded-----	45	*
3422A	Cape silty clay loam, 0 to 2 percent slopes, frequently flooded-----	68	*
3422A+	Cape silt loam, overwash, 0 to 2 percent slopes, frequently flooded-----	29	*
3426L	Karnak silty clay, 0 to 2 percent slopes, frequently flooded, long duration----	3,439	2.1
3449L	Armiesburg-Sarpy complex, 0 to 2 percent slopes, frequently flooded, long duration-----	5,458	3.3
3452L	Riley silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	3,504	2.1
3456B	Ware loam, 1 to 6 percent slopes, frequently flooded-----	7	*
3456BL	Ware loam, 1 to 6 percent slopes, frequently flooded, long duration-----	3,335	2.0
3590L	Cairo silty clay, 0 to 2 percent slopes, frequently flooded, long duration-----	725	0.4
3597L	Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration-----	174	0.1
3682BL	Medway silty clay loam, 1 to 6 percent slopes, frequently flooded, long duration-----	198	0.1
7084A	Okaw silt loam, 0 to 2 percent slopes, rarely flooded-----	1,818	1.1
7122B	Colp silt loam, 2 to 5 percent slopes, rarely flooded-----	10	*
7122C2	Colp silt loam, 5 to 10 percent slopes, eroded, rarely flooded-----	153	*
7131A	Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded-----	1,562	1.0
7131B	Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded-----	976	0.6
7131C	Alvin fine sandy loam, 5 to 10 percent slopes, rarely flooded-----	63	*
7131C2	Alvin fine sandy loam, 5 to 10 percent slopes, eroded, rarely flooded-----	184	0.1
7131D2	Alvin fine sandy loam, 10 to 18 percent slopes, eroded, rarely flooded-----	124	*
7338A	Hurst silt loam, 0 to 2 percent slopes, rarely flooded-----	516	0.3
7338B	Hurst silt loam, 2 to 5 percent slopes, rarely flooded-----	230	0.1
7401A	Okaw silty clay loam, 0 to 2 percent slopes, rarely flooded-----	328	0.2
7460A	Ginat silt loam, 0 to 2 percent slopes, rarely flooded-----	1,553	1.0
7462A	Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded-----	351	0.2
7462B	Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded-----	392	0.2
7462C2	Sciotoville silt loam, 5 to 10 percent slopes, eroded, rarely flooded-----	161	*
7462C3	Sciotoville silt loam, 5 to 10 percent slopes, severely eroded, rarely flooded-	14	*
7462D2	Sciotoville silt loam, 10 to 18 percent slopes, eroded, rarely flooded-----	21	*
7462D3	Sciotoville silt loam, 10 to 18 percent slopes, severely eroded, rarely flooded	70	*
7463A	Wheeling silt loam, 0 to 2 percent slopes, rarely flooded-----	254	0.2
7463B	Wheeling silt loam, 2 to 5 percent slopes, rarely flooded-----	190	0.1
7463C2	Wheeling silt loam, 5 to 10 percent slopes, eroded, rarely flooded-----	48	*
7463D3	Wheeling silt loam, 10 to 18 percent slopes, severely eroded, rarely flooded---	60	*
7711A	Hatfield silt loam, 0 to 2 percent slopes, rarely flooded-----	612	0.4
7711B	Hatfield silt loam, 2 to 5 percent slopes, rarely flooded-----	304	0.2
8070A	Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	247	0.2
8071A	Darwin silty clay, 0 to 2 percent slopes, occasionally flooded-----	6,415	3.9
8072A	Sharon silt loam, 0 to 3 percent slopes, occasionally flooded-----	122	*
8085A	Jacob silty clay, 0 to 2 percent slopes, occasionally flooded-----	433	0.3
8092B	Sarpy sand, 1 to 8 percent slopes, occasionally flooded-----	295	0.2
8108A	Bonnie silt loam, 0 to 2 percent slopes, occasionally flooded-----	5,738	3.5
8109A	Raccoon silt loam, 0 to 2 percent slopes, occasionally flooded-----	551	0.3

See footnote at end of table.

Soil Survey of Alexander County, Illinois

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
8162A	Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	1,371	0.8
8175B	Lamont fine sandy loam, 2 to 7 percent slopes, occasionally flooded-----	442	0.3
8178A	Ruark fine sandy loam, 0 to 2 percent slopes, occasionally flooded-----	909	0.6
8180A	Dupo silt loam, 0 to 2 percent slopes, occasionally flooded-----	1,000	0.6
8184A	Roby fine sandy loam, 0 to 2 percent slopes, occasionally flooded-----	727	0.4
8184B	Roby fine sandy loam, 2 to 5 percent slopes, occasionally flooded-----	122	*
8284A	Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	1,229	0.8
8288A	Petrolia silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	192	0.1
8331A	Haymond silt loam, 0 to 3 percent slopes, occasionally flooded-----	3,248	2.0
8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded-----	2,924	1.8
8334A	Birds silt loam, 0 to 2 percent slopes, occasionally flooded-----	1,360	0.8
8382A	Belknap silt loam, 0 to 2 percent slopes, occasionally flooded-----	2,583	1.6
8420A	Piopolis silty clay loam, 0 to 3 percent slopes, occasionally flooded-----	358	0.2
8422A	Cape silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	1,909	1.2
8422A+	Cape silt loam, overwash, 0 to 2 percent slopes, occasionally flooded-----	1,024	0.6
8426A	Karnak clay, 0 to 2 percent slopes, occasionally flooded-----	3,830	2.3
8426A+	Karnak silt loam, overwash, 0 to 2 percent slopes, occasionally flooded-----	67	*
8452A	Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	2,220	1.4
8452B	Riley silty clay loam, 2 to 5 percent slopes, occasionally flooded-----	821	0.5
8456B	Ware loam, 1 to 6 percent slopes, occasionally flooded-----	2,318	1.4
8475B	Elsah silt loam, 1 to 4 percent slopes, occasionally flooded-----	3,862	2.4
8589B	Bowdre silty clay, 1 to 6 percent slopes, occasionally flooded-----	867	0.5
8590A	Cairo silty clay, 0 to 2 percent slopes, occasionally flooded-----	2,933	1.8
8597A	Armiesburg silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	676	0.4
8682B	Medway silty clay loam, 1 to 6 percent slopes, occasionally flooded-----	24	*
MW	Miscellaneous water-----	3	*
W	Water-----	13,065	8.0
	Total-----	163,270	100.0

* Less than 0.1 percent.

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards

(See text for a description of the limitations and hazards listed in this table.
Absence of an entry indicates the map unit is generally unsuited to cropland or to pastureland)

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
75C: Drury-----	Water erosion	Water erosion
75C3: Drury-----	Water erosion	Water erosion, low fertility
75D: Drury-----	Water erosion	Water erosion
79B: Menfro-----	Crusting, water erosion	Low pH, water erosion
79C: Menfro-----	Crusting, water erosion	Low pH, water erosion
79C2: Menfro-----	Crusting, water erosion	Low pH, water erosion
79C3: Menfro-----	Crusting, water erosion	Low pH, water erosion, low fertility
79D: Menfro-----	Crusting, water erosion	Low pH, water erosion
79D2: Menfro-----	Crusting, water erosion	Low pH, water erosion
79D3: Menfro-----	Crusting, water erosion	Low pH, water erosion, low fertility
79E: Menfro-----	---	Equipment limitation, low pH, water erosion
79E2: Menfro-----	---	Equipment limitation, low pH, water erosion
79E3: Menfro-----	---	Equipment limitation, low pH, water erosion
79F: Menfro-----	---	Equipment limitation, low pH, water erosion
164B: Stoy-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion
175A: Lamont-----	Excessive permeability	Low pH, low fertility, excessive permeability

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
175B: Lamont-----	Water erosion, excessive permeability	Low pH, low fertility, excessive permeability
175C: Lamont-----	Water erosion, excessive permeability	Low pH, water erosion, low fertility, excessive permeability
214B: Hosmer-----	Wetness, root-restrictive layer, crusting, water erosion, restricted permeability	Wetness, root-restrictive layer, low pH, water erosion
214C: Hosmer-----	Wetness, root-restrictive layer, crusting, water erosion, restricted permeability	Wetness, root-restrictive layer, low pH, water erosion
214C2: Hosmer-----	Wetness, root-restrictive layer, crusting, water erosion, restricted permeability	Wetness, root-restrictive layer, low pH, water erosion
214C3: Hosmer-----	Wetness, root-restrictive layer, crusting, water erosion, restricted permeability	Wetness, root-restrictive layer, low pH, water erosion, low fertility
214D2: Hosmer-----	Wetness, root-restrictive layer, crusting, water erosion, restricted permeability	Wetness, root-restrictive layer, low pH, water erosion
214D3: Hosmer-----	---	Wetness, root-restrictive layer, low pH, water erosion, low fertility
216D: Stookey-----	Crusting, water erosion	Low pH, water erosion, low fertility
216D2: Stookey-----	Crusting, water erosion	Low pH, water erosion, low fertility
216E: Stookey-----	---	Equipment limitation, low pH, water erosion, low fertility
216E2: Stookey-----	---	Equipment limitation, low pH, water erosion, low fertility
216E3: Stookey-----	---	Equipment limitation, low pH, water erosion, low fertility

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
216F: Stookey-----	---	Equipment limitation, low pH, water erosion, low fertility
216G: Stookey-----	---	Generally unsuited
471F: Clarksville-----	---	Equipment limitation, low pH, water erosion
471G: Clarksville-----	---	Generally unsuited
477B: Winfield-----	Crusting, water erosion	Low pH, water erosion
477C: Winfield-----	Crusting, water erosion	Low pH, water erosion
477C2: Winfield-----	Crusting, water erosion	Low pH, water erosion
477C3: Winfield-----	Crusting, water erosion	Low pH, water erosion, low fertility
477D2: Winfield-----	Crusting, water erosion	Low pH, water erosion
477D3: Winfield-----	Crusting, water erosion	Low pH, water erosion, low fertility
477E3: Winfield-----	---	Equipment limitation, low pH, water erosion
477F: Winfield-----	---	Equipment limitation, low pH, water erosion
717F: Stookey-----	---	Equipment limitation, low pH, water erosion, low fertility
Clarksville-----	---	Equipment limitation, low pH, water erosion
717G: Clarksville-----	---	Generally unsuited
Stookey-----	---	Generally unsuited
801B: Orthents-----	Crusting, water erosion	Low pH, water erosion, low fertility
802D: Orthents-----	Water erosion, restricted permeability	Water erosion, low fertility

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
832F: Menfro-----	---	Equipment limitation, low pH, water erosion
832F: Clarksville-----	---	Equipment limitation, low pH, water erosion
832G: Clarksville-----	---	Generally unsuited
Menfro-----	---	Generally unsuited
833F: Menfro-----	---	Equipment limitation, low pH, water erosion
Goss-----	---	Equipment limitation, low pH, water erosion
833G: Goss-----	---	Generally unsuited
Menfro-----	---	Generally unsuited
864. Pits, quarries		
865. Pits, gravel		
1426A: Karnak-----	---	Generally unsuited
1843A: Bonnie-----	---	Generally unsuited
Petrolia-----	---	Generally unsuited
1845A: Darwin-----	---	Generally unsuited
Jacob-----	---	Generally unsuited
1846A: Karnak-----	---	Generally unsuited
Cape-----	---	Generally unsuited
3070L: Beaucoup-----	---	Generally unsuited
3071A: Darwin-----	Flooding, ponding, poor tilth, restricted permeability	Flooding, ponding, frost heave
3071L----- Darwin	---	Flooding, ponding, frost heave
3092BL: Sarpy-----	---	Generally unsuited

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
3108A: Bonnie-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
3162L: Gorham-----	---	Generally unsuited
3180L: Dupo-----	---	Generally unsuited
3284L: Tice-----	---	Generally unsuited
3288L: Petrolia-----	---	Generally unsuited
3331A: Haymond-----	Flooding, water erosion	Flooding
3331L: Haymond-----	---	Generally unsuited
3333A: Wakeland-----	Flooding, wetness	Flooding, wetness
3333L: Wakeland-----	---	Generally unsuited
3334A: Birds-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
3334L: Birds-----	---	Generally unsuited
3382A: Belknap-----	Flooding, wetness	Flooding, wetness, low pH
3420A: Piopolis-----	Flooding, ponding, poor tilth, crusting, restricted permeability	Flooding, ponding, poor tilth, low pH, frost heave
3422A: Cape-----	Flooding, ponding, poor tilth, low pH, restricted permeability	Flooding, ponding, poor tilth, low pH, frost heave
3422A+: Cape-----	Flooding, ponding, low pH, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
3426L: Karnak-----	---	Generally unsuited
3449L: Armiesburg-----	---	Generally unsuited
Sarpy-----	---	Generally unsuited

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
3452L: Riley-----	---	Generally unsuited
3456B: Ware-----	Flooding, very excess lime, water erosion	Flooding, very excess lime
3456BL: Ware-----	---	Generally unsuited
3590L: Cairo-----	---	Generally unsuited
3597L: Armiesburg-----	---	Generally unsuited
3682BL: Medway-----	---	Generally unsuited
7084A: Okaw-----	Ponding, low pH, crusting, restricted permeability	Ponding, low pH, frost heave
7122B: Colp-----	Crusting, water erosion, restricted permeability	Low pH, water erosion
7122C2: Colp-----	Crusting, water erosion, restricted permeability	Low pH, water erosion
7131A: Alvin-----	No limitations and hazards	Low pH, low fertility
7131B: Alvin-----	Water erosion	Low pH, low fertility
7131C: Alvin-----	Water erosion	Low pH, water erosion, low fertility
7131C2: Alvin-----	Water erosion	Low pH, water erosion, low fertility
7131D2: Alvin-----	Water erosion	Low pH, water erosion, low fertility
7338A: Hurst-----	Wetness, low pH, crusting, restricted permeability	Wetness, low pH
7338B: Hurst-----	Wetness, low pH, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion
7401A: Okaw-----	Ponding, poor tilth, low pH, restricted permeability	Ponding, poor tilth, low pH, frost heave

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
7460A: Ginat-----	Ponding, crusting, restricted permeability	Ponding, low pH, frost heave
7462A: Sciotoville-----	Wetness, crusting, restricted permeability	Wetness, low pH
7462B: Sciotoville-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion
7462C2: Sciotoville-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion
7462C3: Sciotoville-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion, low fertility
7462D2: Sciotoville-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion
7462D3: Sciotoville-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion, low fertility
7463A: Wheeling-----	Crusting, excessive permeability	Low pH, excessive permeability
7463B: Wheeling-----	Crusting, water erosion, excessive permeability	Low pH, water erosion, excessive permeability
7463C2: Wheeling-----	Crusting, water erosion, excessive permeability	Low pH, water erosion, excessive permeability
7463D3: Wheeling-----	Crusting, water erosion, excessive permeability	Low pH, water erosion, excessive permeability
7711A: Hatfield-----	Wetness, crusting, restricted permeability	Wetness, low pH
7711B: Hatfield-----	Wetness, crusting, water erosion, restricted permeability	Wetness, low pH, water erosion
8070A: Beaucoup-----	Flooding, ponding	Flooding, ponding, frost heave

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
8071A: Darwin-----	Flooding, ponding, poor tilth, restricted permeability	Flooding, ponding, frost heave
8072A: Sharon-----	Flooding, water erosion	Flooding, low pH
8085A: Jacob-----	Flooding, ponding, poor tilth, low pH, restricted permeability	Flooding, ponding, poor tilth, low pH, frost heave
8092B: Sarpy-----	Flooding, wind erosion, limited available water capacity, excessive permeability	Flooding, wind erosion, limited available water capacity, low fertility, excessive permeability
8108A: Bonnie-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
8109A: Raccoon-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
8162A: Gorham-----	Flooding, ponding, restricted permeability	Flooding, ponding, low pH, frost heave
8175B: Lamont-----	Flooding, water erosion, excessive permeability	Flooding, low pH, low fertility, excessive permeability
8178A: Ruark-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
8180A: Dupo-----	Flooding, wetness, excess lime, restricted permeability	Flooding, wetness, excess lime
8184A: Roby-----	Flooding, wetness	Flooding, wetness, low pH, low fertility
8184B: Roby-----	Flooding, wetness, water erosion	Flooding, wetness, low pH, low fertility
8284A: Tice-----	Flooding, wetness, poor tilth, crusting	Flooding, wetness, poor tilth
8288A: Petrolia-----	Flooding, ponding, poor tilth, crusting, restricted permeability	Flooding, ponding, poor tilth, frost heave

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
8331A: Haymond-----	Flooding, water erosion	Flooding
8333A: Wakeland-----	Flooding, wetness	Flooding, wetness
8334A: Birds-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
8382A: Belknap-----	Flooding, wetness	Flooding, wetness, low pH
8420A: Piopolis-----	Flooding, ponding, poor tilth, crusting, restricted permeability	Flooding, ponding, poor tilth, low pH, frost heave
8422A: Cape-----	Flooding, ponding, poor tilth, low pH, restricted permeability	Flooding, ponding, poor tilth, low pH, frost heave
8422A+: Cape-----	Flooding, ponding, low pH, crusting, restricted permeability	Flooding, ponding, low pH, frost heave
8426A: Karnak-----	Flooding, ponding, poor tilth, restricted permeability	Flooding, ponding, poor tilth, frost heave
8426A+: Karnak-----	Flooding, ponding, crusting, restricted permeability	Flooding, ponding, frost heave
8452A: Riley-----	Flooding, wetness, excessive permeability	Flooding, wetness, excessive permeability
8452B: Riley-----	Flooding, wetness, water erosion, excessive permeability	Flooding, wetness, water erosion, excessive permeability
8456B: Ware-----	Flooding, excess lime, crusting, water erosion	Flooding, excess lime
8475B: Elsah-----	Flooding, crusting, water erosion	Flooding, water erosion
8589B: Bowdre-----	Flooding, wetness, poor tilth, water erosion, restricted permeability	Flooding, wetness, poor tilth
8590A: Cairo-----	Flooding, ponding, poor tilth, restricted permeability, excessive permeability	Flooding, ponding, frost heave, excessive permeability

Soil Survey of Alexander County, Illinois

Table 5.—Cropland and Pastureland Limitations and Hazards—Continued

Soil name and map symbol	Cropland limitations and hazards	Pastureland limitations and hazards
8597A: Armiesburg-----	Flooding	Flooding
8682B: Medway-----	Flooding, wetness, excess lime, water erosion	Flooding, wetness, water erosion, excess lime
MW. Miscellaneous water		
W. Water		

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Tons</u>	<u>AUM</u>
75C----- Drury	3e	151.00	47.00	59.00	---	5.00	7.40
75C3----- Drury	3e	134.00	41.00	52.00	---	4.50	6.40
75D----- Drury	4e	139.00	43.00	54.00	---	4.60	6.80
79B----- Menfro	2e	148.00	46.00	56.00	109.00	4.40	6.40
79C----- Menfro	3e	143.00	45.00	55.00	107.00	4.30	6.40
79C2----- Menfro	3e	139.00	43.00	53.00	102.00	4.10	6.00
79C3----- Menfro	4e	128.00	40.00	49.00	95.00	3.80	5.50
79D----- Menfro	4e	133.00	41.00	51.00	98.00	4.00	5.70
79D2----- Menfro	4e	127.00	39.00	49.00	94.00	3.80	5.40
79D3----- Menfro	4e	116.00	36.00	45.00	86.00	3.40	4.90
79E----- Menfro	6e	---	---	---	---	3.50	5.10
79E2----- Menfro	6e	---	---	---	---	3.30	4.70
79E3----- Menfro	6e	---	---	---	---	3.00	4.20
79F----- Menfro	6e	---	---	---	---	2.70	3.80
164B----- Stoy	2e	130.00	42.00	51.00	101.00	4.10	6.00
175A----- Lamont	2s	118.00	39.00	49.00	---	2.90	4.30
175B----- Lamont	3e	117.00	39.00	49.00	---	2.90	4.30
175C----- Lamont	3e	114.00	38.00	48.00	---	2.90	4.20

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit—Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Tons</u>	<u>AUM</u>
214B----- Hosmer	2e	125.00	41.00	51.00	98.00	3.30	4.70
214C----- Hosmer	3e	121.00	39.00	50.00	95.00	3.20	4.60
214C2----- Hosmer	3e	113.00	37.00	47.00	89.00	3.00	4.20
214C3----- Hosmer	4e	93.00	30.00	38.00	73.00	2.40	3.50
214D2----- Hosmer	4e	101.00	33.00	42.00	79.00	2.60	3.70
214D3----- Hosmer	6e	---	---	---	---	2.10	3.10
216D----- Stookey	3e	128.00	39.00	47.00	94.00	3.50	5.10
216D2----- Stookey	3e	122.00	37.00	45.00	90.00	4.40	4.80
216E----- Stookey	6e	---	---	---	---	3.20	4.60
216E2----- Stookey	6e	---	---	---	---	3.20	4.20
216E3----- Stookey	6e	---	---	---	---	2.70	3.80
216F----- Stookey	6e	---	---	---	---	2.40	3.40
216G----- Stookey	7e	---	---	---	---	---	---
471F----- Clarksville	6e	---	---	---	---	1.50	2.10
471G----- Clarksville	7e	---	---	---	---	---	---
477B----- Winfield	2e	145.00	45.00	56.00	110.00	4.50	6.60
477C----- Winfield	3e	142.00	44.00	55.00	108.00	4.40	6.40
477C2----- Winfield	3e	136.00	42.00	53.00	103.00	4.20	6.20
477C3----- Winfield	4e	126.00	39.00	49.00	95.00	3.90	5.60
477D2----- Winfield	4e	124.00	38.00	48.00	94.00	3.80	5.60

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit—Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Tons</u>	<u>AUM</u>
477D3----- Winfield	4e	114.00	35.00	44.00	87.00	3.50	5.00
477E3----- Winfield	6e	---	---	---	---	3.10	5.30
477F----- Winfield	6e	---	---	---	---	2.70	3.90
717F----- Stookey-Clarksville	6e	---	---	---	---	1.90	2.70
717G----- Clarksville-Stookey	7e	---	---	---	---	---	---
801B----- Orthents	2e	---	---	---	---	---	---
802D----- Orthents	3e	---	---	---	---	---	---
832F----- Menfro-Clarksville	6e	---	---	---	---	2.10	3.10
832G----- Clarksville-Menfro	7e	---	---	---	---	---	---
833F----- Menfro-Goss	6e	---	---	---	---	2.10	3.10
833G----- Goss-Menfro	7e	---	---	---	---	---	---
864. Pits, quarries							
865. Pits, gravel							
1426A----- Karnak	5w	---	---	---	---	---	---
1843A----- Bonnie and Petrolia	5w	---	---	---	---	---	---
1845A----- Darwin and Jacob	5w	---	---	---	---	---	---
1846A----- Karnak and Cape	5w	---	---	---	---	---	---
3070L----- Beaucoup	5w	---	---	---	---	---	---
3071A----- Darwin	4w	121.00	42.00	---	---	3.56	5.20
3071L----- Darwin	5w	---	---	---	---	---	---

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit—Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Tons</u>	<u>AUM</u>
3092BL----- Sarpy	5w	---	---	---	---	---	---
3108A----- Bonnie	3w	121.00	40.00	---	---	3.76	5.60
3162L----- Gorham	5w	---	---	---	---	---	---
3180L----- Dupo	5w	---	---	---	---	---	---
3284L----- Tice	5w	---	---	---	---	---	---
3288L----- Petrolia	5w	---	---	---	---	---	---
3331A----- Haymond	2w	147.00	46.00	---	---	4.68	6.90
3331L----- Haymond	5w	---	---	---	---	---	---
3333A----- Wakeland	2w	141.00	46.00	---	---	4.17	6.10
3333L----- Wakeland	5w	---	---	---	---	---	---
3334A----- Birds	3w	127.00	42.00	---	---	3.97	5.80
3334L----- Birds	5w	---	---	---	---	---	---
3382A----- Belknap	3w	127.00	42.00	---	---	3.96	5.90
3420A----- Piopolis	3w	115.00	40.00	---	---	3.56	5.20
3422A----- Cape	3w	111.00	38.00	---	---	3.46	5.10
3422A+----- Cape	3w	111.00	38.00	---	---	3.46	5.10
3426L----- Karnak	5w	---	---	---	---	---	---
3449L----- Armiesburg and Sarpy	5w	---	---	---	---	---	---
3452L----- Riley	5w	---	---	---	---	---	---
3456B----- Ware	3s	127.00	41.00	---	---	4.13	6.10

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit—Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Tons</u>	<u>AUM</u>
3456BL----- Ware	5w	---	---	---	---	---	---
3590L----- Cairo	5w	---	---	---	---	---	---
3597L----- Armiesburg	5w	---	---	---	---	---	---
3682BL----- Medway	5w	---	---	---	---	---	---
7084A----- Okaw	3w	116.00	38.00	50.00	---	3.39	5.00
7122B----- Colp	3e	120.00	38.00	50.00	---	3.80	5.60
7122C2----- Colp	4e	109.00	34.00	46.00	---	3.50	5.00
7131A----- Alvin	2s	135.00	44.00	53.00	---	4.00	4.80
7131B----- Alvin	2e	134.00	44.00	52.00	---	3.40	5.00
7131C----- Alvin	3e	131.00	43.00	51.00	---	3.30	4.80
7131C2----- Alvin	3e	126.00	41.00	49.00	---	3.20	4.60
7131D2----- Alvin	4e	115.00	37.00	45.00	---	2.90	4.20
7338A----- Hurst	3w	121.00	39.00	50.00	---	3.73	5.50
7338B----- Hurst	3w	120.00	39.00	50.00	---	3.69	5.40
7401A----- Okaw	3w	107.00	34.00	41.00	93.00	3.39	5.00
7460A----- Ginat	3w	128.00	44.00	53.00	---	4.00	5.80
7462A----- Sciotoville	2w	126.00	42.00	53.00	---	3.60	5.30
7462B----- Sciotoville	2e	125.00	42.00	52.00	---	3.60	5.20
7462C2----- Sciotoville	3e	117.00	39.00	49.00	---	3.40	4.90
7462C3----- Sciotoville	4e	108.00	36.00	46.00	---	3.11	4.40

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit—Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Tons</u>	<u>AUM</u>
7462D2----- Sciotoville	4e	107.00	36.00	45.00	---	3.07	4.40
7462D3----- Sciotoville	4e	98.00	33.00	41.00	---	2.80	4.00
7463A----- Wheeling	2s	132.00	43.00	53.00	---	3.39	5.00
7463B----- Wheeling	2e	131.00	43.00	52.00	---	3.36	5.00
7463C2----- Wheeling	3e	123.00	40.00	49.00	---	3.15	4.60
7463D3----- Wheeling	4e	103.00	34.00	41.00	---	2.64	3.80
7711A----- Hatfield	2w	126.00	42.00	53.00	---	4.18	6.20
7711B----- Hatfield	2e	125.00	42.00	52.00	---	4.14	6.00
8070A----- Beaucoup	2w	159.00	53.00	62.00	---	4.90	7.20
8071A----- Darwin	3w	134.00	45.00	54.00	---	3.96	5.80
8072A----- Sharon	2w	148.00	48.00	57.00	---	4.30	6.30
8085A----- Jacob	4w	95.00	35.00	38.00	---	3.05	4.50
8092B----- Sarpy	4s	98.00	33.00	36.00	---	3.36	4.90
8108A----- Bonnie	3w	134.00	44.00	53.00	---	4.18	6.20
8109A----- Raccoon	3w	130.00	41.00	51.00	103.00	3.50	5.20
8162A----- Gorham	3w	140.00	46.00	54.00	---	4.10	4.60
8175B----- Lamont	3e	118.00	39.00	49.00	---	2.90	4.20
8178A----- Ruark	3w	118.00	40.00	50.00	---	3.96	5.80
8180A----- Dupo	2w	164.00	51.00	61.00	---	4.60	6.80
8184A----- Roby	2s	131.00	45.00	52.00	---	4.20	6.20

Soil Survey of Alexander County, Illinois

Table 6.—Land Capability and Yields per Acre of Crops and Pasture by Map Unit—Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grain sorghum	Grass- legume hay	Grass- legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM
8184B----- Roby	2e	130.00	45.00	51.00	---	4.10	6.10
8284A----- Tice	2w	166.00	51.00	63.00	---	5.09	7.50
8288A----- Petrolia	3w	146.00	44.00	55.00	---	4.41	6.50
8331A----- Haymond	2w	163.00	51.00	63.00	---	5.20	7.70
8333A----- Wakeland	2w	157.00	51.00	61.00	---	4.63	6.80
8334A----- Birds	2w	141.00	46.00	55.00	---	4.41	6.50
8382A----- Belknap	2w	141.00	47.00	57.00	---	4.41	6.50
8420A----- Piopolis	3w	128.00	44.00	53.00	---	3.96	5.80
8422A----- Cape	3w	123.00	42.00	52.00	---	3.84	5.70
8422A+----- Cape	3w	123.00	42.00	52.00	---	3.84	5.70
8426A----- Karnak	3w	121.00	41.00	47.00	---	3.62	5.30
8426A+----- Karnak	3w	122.00	41.00	47.00	---	3.62	5.30
8452A----- Riley	2w	155.00	50.00	60.00	---	4.52	6.70
8452B----- Riley	2e	153.00	50.00	59.00	---	4.47	6.50
8456B----- Ware	2s	142.00	46.00	56.00	---	4.58	6.70
8475B----- Elsah	2s	131.00	44.00	50.00	---	3.73	5.50
8589B----- Bowdre	2w	136.00	43.00	51.00	---	4.03	5.90
8590A----- Cairo	3w	143.00	48.00	55.00	---	4.29	6.30
8597A----- Armiesburg	2w	160.00	51.00	62.00	---	6.00	8.80
8682B----- Medway	2e	157.00	50.00	61.00	---	5.03	7.40
MW. Miscellaneous water							
W. Water							

Soil Survey of Alexander County, Illinois

Table 7.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
79B	Menfro silt loam, 2 to 5 percent slopes
164B	Stoy silt loam, 2 to 5 percent slopes
175A	Lamont fine sandy loam, 0 to 2 percent slopes
175B	Lamont fine sandy loam, 2 to 5 percent slopes
214B	Hosmer silt loam, 2 to 5 percent slopes
477B	Winfield silt loam, 2 to 5 percent slopes
3071A	Darwin silty clay, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3108A	Bonnie silt loam, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3331A	Haymond silt loam, 0 to 3 percent slopes, frequently flooded (if protected from flooding or not frequently flooded during the growing season)
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3334A	Birds silt loam, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3382A	Belknap silt loam, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3420A	Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3422A	Cape silty clay loam, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3422A+	Cape silt loam, overwash, 0 to 2 percent slopes, frequently flooded (if drained and either protected from flooding or not frequently flooded during the growing season)
3456B	Ware loam, 1 to 6 percent slopes, frequently flooded (if protected from flooding or not frequently flooded during the growing season)
7122B	Colp silt loam, 2 to 5 percent slopes, rarely flooded
7131A	Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded
7131B	Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded
7131C	Alvin fine sandy loam, 5 to 10 percent slopes, rarely flooded
7131C2	Alvin fine sandy loam, 5 to 10 percent slopes, eroded, rarely flooded
7460A	Ginat silt loam, 0 to 2 percent slopes, rarely flooded (if drained)
7462A	Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded
7462B	Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded
7463A	Wheeling silt loam, 0 to 2 percent slopes, rarely flooded
7463B	Wheeling silt loam, 2 to 5 percent slopes, rarely flooded
7711A	Hatfield silt loam, 0 to 2 percent slopes, rarely flooded (if drained)
7711B	Hatfield silt loam, 2 to 5 percent slopes, rarely flooded (if drained)
8070A	Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8071A	Darwin silty clay, 0 to 2 percent slopes, occasionally flooded (if drained)
8072A	Sharon silt loam, 0 to 3 percent slopes, occasionally flooded
8108A	Bonnie silt loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8109A	Racoon silt loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8162A	Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8175B	Lamont fine sandy loam, 2 to 7 percent slopes, occasionally flooded
8178A	Ruark fine sandy loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8180A	Dupo silt loam, 0 to 2 percent slopes, occasionally flooded
8184A	Roby fine sandy loam, 0 to 2 percent slopes, occasionally flooded
8184B	Roby fine sandy loam, 2 to 5 percent slopes, occasionally flooded
8284A	Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded
8288A	Petrolia silty clay loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8331A	Haymond silt loam, 0 to 3 percent slopes, occasionally flooded
8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8334A	Birds silt loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8382A	Belknap silt loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8420A	Piopolis silty clay loam, 0 to 3 percent slopes, occasionally flooded (if drained)

Soil Survey of Alexander County, Illinois

Table 7.—Prime Farmland—Continued

Map symbol	Soil name
8422A	Cape silty clay loam, 0 to 2 percent slopes, occasionally flooded (if drained)
8422A+	Cape silt loam, overwash, 0 to 2 percent slopes, occasionally flooded (if drained)
8452A	Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded
8452B	Riley silty clay loam, 2 to 5 percent slopes, occasionally flooded
8456B	Ware loam, 1 to 6 percent slopes, occasionally flooded
8475B	Elsah silt loam, 1 to 4 percent slopes, occasionally flooded
8589B	Bowdre silty clay, 1 to 6 percent slopes, occasionally flooded
8590A	Cairo silty clay, 0 to 2 percent slopes, occasionally flooded (if drained)
8597A	Armiesburg silty clay loam, 0 to 2 percent slopes, occasionally flooded
8682B	Medway silty clay loam, 1 to 6 percent slopes, occasionally flooded

Soil Survey of Alexander County, Illinois

Table 8.—Hydric Soils

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
1426A: Karnak silty clay, undrained, 0 to 2 percent slopes, frequently flooded	Karnak, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
1843A: Bonnie and Petrolia soils, undrained, 0 to 2 percent slopes, frequently flooded	Bonnie, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
	Petrolia, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
1845A: Darwin and Jacob silty clays, undrained, 0 to 2 percent slopes, frequently flooded	Darwin, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
	Jacob, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
1846A: Karnak and Cape silty clays, undrained, 0 to 2 percent slopes, frequently flooded	Karnak, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
	Cape, undrained, frequently flooded	Yes	flood plains	Yes	Yes	Yes
3070L: Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Beaucoup, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3071A: Darwin silty clay, 0 to 2 percent slopes, frequently flooded	Darwin, frequently flooded	Yes	flood plains	Yes	No	No
3071L: Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration	Darwin, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes

Soil Survey of Alexander County, Illinois

Table 8.—Hydric Soils—Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3092BL: Sarpy fine sand, 1 to 8 percent slopes, frequently flooded, long duration	Sarpy, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3108A: Bonnie silt loam, 0 to 2 percent slopes, frequently flooded	Bonnie, frequently flooded	Yes	flood plains	Yes	No	No
3162L: Gorham silty clay loam, 0 to 3 percent slopes, frequently flooded, long duration	Gorham, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3180L: Dupo silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Dupo, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3284L: Tice silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Tice, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3288L: Petrolia silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Petrolia, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3331L: Haymond silt loam, 0 to 3 percent slopes, frequently flooded, long duration	Haymond, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3333L: Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Wakeland, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3334A: Birds silt loam, 0 to 2 percent slopes, frequently flooded	Birds, frequently flooded	Yes	flood plains	Yes	No	No

Soil Survey of Alexander County, Illinois

Table 8.—Hydric Soils—Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3334L: Birds silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Birds, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3420A: Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded	Piopolis, frequently flooded	Yes	flood plains	Yes	No	No
3422A: Cape silty clay loam, 0 to 2 percent slopes, frequently flooded	Cape, frequently flooded	Yes	flood plains	Yes	No	No
3422A+: Cape silt loam, overwash, 0 to 2 percent slopes, frequently flooded	Cape, overwash, frequently flooded	Yes	flood plains	Yes	No	No
3426L: Karnak silty clay, 0 to 2 percent slopes, frequently flooded, long duration	Karnak, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3449L: Armiesburg-Sarpy complex, 0 to 2 percent slopes, frequently flooded, long duration	Armiesburg, frequently flooded, long duration	Yes	flood plains	No	Yes	No
	Sarpy, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3452L: Riley silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Riley, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3456BL: Ware loam, 1 to 6 percent slopes, frequently flooded, long duration	Ware, frequently flooded, long duration	Yes	flood plains	No	Yes	No

Soil Survey of Alexander County, Illinois

Table 8.—Hydric Soils—Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3590L: Cairo silty clay, 0 to 2 percent slopes, frequently flooded, long duration	Cairo, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3597L: Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Armiesburg, frequently flooded, long duration	Yes	flood plains	No	Yes	No
3682BL: Medway silty clay loam, 1 to 6 percent slopes, frequently flooded, long duration	Medway, frequently flooded, long duration	Yes	flood plains	No	Yes	No
7084A: Okaw silt loam, 0 to 2 percent slopes, rarely flooded	Okaw, rarely flooded	Yes	terraces	Yes	No	No
7401A: Okaw silty clay loam, 0 to 2 percent slopes, rarely flooded	Okaw, rarely flooded	Yes	terraces	Yes	No	No
7460A: Ginat silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	Yes	terraces	Yes	No	No
8070A: Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded	Beaucoup, occasionally flooded	Yes	flood plains	Yes	No	No
8071A: Darwin silty clay, 0 to 2 percent slopes, occasionally flooded	Darwin, occasionally flooded	Yes	flood plains	Yes	No	No
8085A: Jacob silty clay, 0 to 2 percent slopes, occasionally flooded	Jacob, occasionally flooded	Yes	flood plains	Yes	No	No
8108A: Bonnie silt loam, 0 to 2 percent slopes, occasionally flooded	Bonnie, occasionally flooded	Yes	flood plains	Yes	No	No

Soil Survey of Alexander County, Illinois

Table 8.—Hydric Soils—Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
8109A: Raccoon silt loam, 0 to 2 percent slopes, occasionally flooded	Raccoon, occasionally flooded	Yes	fans	Yes	No	No
8162A: Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded	Gorham, occasionally flooded	Yes	flood plains	Yes	No	No
8178A: Ruark fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Ruark, occasionally flooded	Yes	terraces	Yes	No	No
8288A: Petrolia silty clay loam, 0 to 2 percent slopes, occasionally flooded	Petrolia, occasionally flooded	Yes	flood plains	Yes	No	No
8334A: Birds silt loam, 0 to 2 percent slopes, occasionally flooded	Birds, occasionally flooded	Yes	flood plains	Yes	No	No
8420A: Piopolis silty clay loam, 0 to 2 percent slopes, occasionally flooded	Piopolis, occasionally flooded	Yes	flood plains	Yes	No	No
8422A: Cape silty clay loam, 0 to 2 percent slopes, occasionally flooded	Cape, occasionally flooded	Yes	flood plains	Yes	No	No
8422A+: Cape silt loam, overwash, 0 to 2 percent slopes, occasionally flooded	Cape, overwash, occasionally flooded	Yes	flood plains	Yes	No	No
8426A: Karnak clay, 0 to 2 percent slopes, occasionally flooded	Karnak, occasionally flooded	Yes	flood plains	Yes	No	No
8426A+: Karnak silt loam, overwash, 0 to 2 percent slopes, occasionally flooded	Karnak, overwash, occasionally flooded	Yes	flood plains	Yes	No	No
8590A: Cairo silty clay, 0 to 2 percent slopes, occasionally flooded	Cairo, occasionally flooded	Yes	flood plains	Yes	No	No

Soil Survey of Alexander County, Illinois

Table 9.—Non-Hydric Soils With Minor Components of Hydric Soils

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
3180L: Dupo silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Darwin, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3284L: Tice silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Darwin, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3333A: Wakeland silt loam, 0 to 2 percent slopes, frequently flooded	Birds, frequently flooded	Yes	flood plains	Yes	No	No
3333L: Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Birds, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3382A: Belknap silt loam, 0 to 2 percent slopes, frequently flooded	Bonnie, frequently flooded	Yes	flood plains	Yes	No	No
	Piopolis, frequently flooded	Yes	flood plains	Yes	No	No
3452L: Riley silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Gorham, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
3682BL: Medway silty clay loam, 1 to 6 percent slopes, frequently flooded, long duration	Gorham, frequently flooded, long duration	Yes	flood plains	Yes	Yes	Yes
7338A: Hurst silt loam, 0 to 2 percent slopes, rarely flooded	Okaw, rarely flooded	Yes	terraces	Yes	No	No
7462A: Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	Yes	terraces	Yes	No	No

Soil Survey of Alexander County, Illinois

Table 9.—Non-Hydric Soils With Minor Components of Hydric Soils—Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric soils criteria		
				Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
7463A: Wheeling silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	Yes	terraces	Yes	No	No
7711A: Hatfield silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	Yes	terraces	Yes	No	No
8180A: Dupo silt loam, 0 to 2 percent slopes, occasionally flooded	Darwin, occasionally flooded	Yes	flood plains	Yes	No	No
8184A: Roby fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Ruark, occasionally flooded	Yes	terraces	Yes	No	No
8284A: Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded	Darwin, occasionally flooded	Yes	flood plains	Yes	No	No
8333A: Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded	Birds, occasionally flooded	Yes	flood plains	Yes	No	No
8382A: Belknap silt loam, 0 to 2 percent slopes, occasionally flooded	Bonnie, occasionally flooded	Yes	flood plains	Yes	No	No
	Piopolis, occasionally flooded	Yes	flood plains	Yes	No	No
8452A: Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded	Gorham, occasionally flooded	Yes	flood plains	Yes	No	No
8452B: Riley silty clay loam, 2 to 5 percent slopes, occasionally flooded	Gorham, occasionally flooded	Yes	flood plains	Yes	No	No
8589B: Bowdre silty clay, 1 to 6 percent slopes, occasionally flooded	Cairo, occasionally flooded	Yes	flood plains	Yes	No	No
8682B: Medway silty clay loam, 1 to 6 percent slopes, occasionally flooded	Gorham, occasionally flooded	Yes	flood plains	Yes	No	No

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
75C: Drury-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
75C3: Drury-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
75D: Drury-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
79B: Menfro-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
79C: Menfro-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
79C2: Menfro-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
79C3: Menfro-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
79D: Menfro-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
79D2: Menfro-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
79D3: Menfro-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
79E: Menfro-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
79E2: Menfro-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
79E3: Menfro-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
79F: Menfro-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
164B: Stoy-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
175A: Lamont-----	Moderate Sandiness	Moderately suited Sandiness	Moderately suited Sandiness
175B: Lamont-----	Moderate Sandiness	Moderately suited Sandiness	Moderately suited Sandiness
175C: Lamont-----	Moderate Sandiness	Moderately suited Sandiness Slope	Moderately suited Sandiness
214B: Hosmer-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
214C: Hosmer-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
214C2: Hosmer-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
214C3: Hosmer-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
214D2: Hosmer-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
214D3: Hosmer-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
216D: Stookey-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
216D2: Stookey-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
216E: Stookey-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
216E2: Stookey-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
216E3: Stookey-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
216F: Stookey-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
216G: Stookey-----	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength
471F: Clarksville-----	Moderate Slope	Poorly suited Slope	Moderately suited Slope
471G: Clarksville-----	Severe Slope	Poorly suited Slope	Poorly suited Slope
477B: Winfield-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
477C: Winfield-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
477C2: Winfield-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
477C3: Winfield-----	Slight	Moderately suited Low strength Slope	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
477D2: Winfield-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
477D3: Winfield-----	Slight	Poorly suited Slope Low strength	Moderately suited Low strength
477E3: Winfield-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
477F: Winfield-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
717F: Stookey-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
Clarksville-----	Moderate Slope	Poorly suited Slope	Moderately suited Slope
717G: Clarksville-----	Severe Slope	Poorly suited Slope	Poorly suited Slope
Stookey-----	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength
801B: Orthents-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
802D: Orthents-----	Moderate Low strength	Moderately suited Slope Low strength	Moderately suited Low strength
832F: Menfro-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
Clarksville-----	Moderate Slope	Poorly suited Slope	Moderately suited Slope
832G: Clarksville-----	Severe Slope	Poorly suited Slope	Poorly suited Slope
Menfro-----	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
833F: Menfro-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
Goss-----	Moderate Slope	Poorly suited Slope Low strength	Moderately suited Low strength Slope
833G: Goss-----	Severe Slope	Poorly suited Slope Low strength	Poorly suited Slope Low strength
Menfro-----	Severe Slope Low strength	Poorly suited Slope Low strength	Poorly suited Slope Low strength
864: Pits, quarries-----	Not rated	Not rated	Not rated
865: Pits, gravel-----	Not rated	Not rated	Not rated
1426A: Karnak-----	Severe Flooding Wetness Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Poorly suited Wetness Low strength Stickiness; high plasticity index
1843A: Bonnie-----	Severe Flooding Wetness Low strength	Poorly suited Ponding Flooding Wetness Low strength	Poorly suited Wetness Low strength
Petrolia-----	Severe Flooding Wetness Low strength	Poorly suited Ponding Flooding Wetness Low strength	Poorly suited Wetness Low strength
1845A: Darwin-----	Severe Flooding Wetness Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Poorly suited Wetness Low strength Stickiness; high plasticity index

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
1845A: Jacob-----	Severe Flooding Wetness Stickiness/slope Low strength	Poorly suited Ponding Flooding Wetness Stickiness; high plasticity index Low strength	Poorly suited Wetness Low strength Stickiness; high plasticity index
1846A: Karnak-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
Cape-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3070L: Beaucoup-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3071A: Darwin-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
3071L: Darwin-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
3092BL: Sarpy-----	Severe Flooding	Poorly suited Flooding	Well suited
3108A: Bonnie-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3162L: Gorham-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3180L: Dupo-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3284L: Tice-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3288L: Petrolia-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3331A: Haymond-----	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3331L: Haymond-----	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3333A: Wakeland-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3333L: Wakeland-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3334A: Birds-----	Severe Flooding Wetness Low strength	Poorly suited Ponding Flooding Wetness Low strength	Poorly suited Wetness Low strength
3334L: Birds-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3382A: Belknap-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
3420A: Piopolis-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3422A: Cape-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3422A+: Cape-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
3426L: Karnak-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
3449L: Armiesburg-----	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
Sarpy-----	Severe Flooding	Poorly suited Flooding	Well suited
3452L: Riley-----	Severe Flooding Low strength	Poorly suited Flooding Low strength Wetness	Moderately suited Low strength
3456B: Ware-----	Severe Flooding	Poorly suited Flooding	Well suited
3456BL: Ware-----	Severe Flooding	Poorly suited Flooding	Well suited

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
3590L: Cairo-----	Severe Flooding Wetness Stickiness/slope Low strength	Poorly suited Ponding Flooding Stickiness; high plasticity index Low strength Wetness	Poorly suited Wetness Low strength Stickiness; high plasticity index
3597L: Armiesburg-----	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
3682BL: Medway-----	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
7084A: Okaw-----	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7122B: Colp-----	Moderate Low strength Stickiness/slope	Moderately suited Low strength	Moderately suited Low strength
7122C2: Colp-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
7131A: Alvin-----	Slight	Well suited	Well suited
7131B: Alvin-----	Slight	Well suited	Well suited
7131C: Alvin-----	Slight	Moderately suited Slope	Well suited
7131C2: Alvin-----	Slight	Moderately suited Slope	Well suited
7131D2: Alvin-----	Slight	Poorly suited Slope	Well suited
7338A: Hurst-----	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part I--Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
7338B: Hurst-----	Moderate Low strength	Moderately suited Low strength Wetness	Moderately suited Low strength
7401A: Okaw-----	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7460A: Ginat-----	Moderate Low strength	Poorly suited Ponding Wetness Low strength	Moderately suited Low strength
7462A: Sciotoville-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7462B: Sciotoville-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7462C2: Sciotoville-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
7462C3: Sciotoville-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength
7462D2: Sciotoville-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
7462D3: Sciotoville-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
7463A: Wheeling-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7463B: Wheeling-----	Moderate Low strength	Moderately suited Low strength	Moderately suited Low strength
7463C2: Wheeling-----	Moderate Low strength	Moderately suited Low strength Slope	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
7463D3: Wheeling-----	Moderate Low strength	Poorly suited Slope Low strength	Moderately suited Low strength
7711A: Hatfield-----	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
7711B: Hatfield-----	Moderate Low strength	Moderately suited Wetness Low strength	Moderately suited Low strength
8070A: Beaucoup-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8071A: Darwin-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
8072A: Sharon-----	Moderate Flooding Low strength	Moderately suited Flooding Low strength	Moderately suited Low strength
8085A: Jacob-----	Severe Flooding Stickiness/slope Low strength	Poorly suited Ponding Flooding Wetness Stickiness; high plasticity index Low strength	Moderately suited Low strength Stickiness; high plasticity index
8092B: Sarpy-----	Moderate Flooding	Moderately suited Flooding	Well suited
8108A: Bonnie-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
8109A: Raccoon-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8162A: Gorham-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8175B: Lamont-----	Moderate Flooding Sandiness	Moderately suited Flooding Sandiness	Moderately suited Sandiness
8178A: Ruark-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8180A: Dupo-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
8184A: Roby-----	Severe Flooding	Poorly suited Flooding	Well suited
8184B: Roby-----	Severe Flooding	Poorly suited Flooding	Well suited
8284A: Tice-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
8288A: Petrolia-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8331A: Haymond-----	Moderate Flooding Low strength	Moderately suited Flooding Low strength	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
8333A: Wakeland-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
8334A: Birds-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8382A: Belknap-----	Severe Flooding Low strength	Poorly suited Flooding Wetness Low strength	Moderately suited Low strength
8420A: Piopolis-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8422A: Cape-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8422A+: Cape-----	Severe Flooding Low strength	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8426A: Karnak-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index	Moderately suited Low strength Stickiness; high plasticity index
8426A+: Karnak-----	Severe Flooding Low strength Stickiness/slope	Poorly suited Ponding Flooding Wetness Low strength	Moderately suited Low strength
8452A: Riley-----	Severe Flooding Low strength	Poorly suited Flooding Low strength Wetness	Moderately suited Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part I—Continued

Map symbol and soil name	Limitation for haul roads and major skid trails	Suitability for log landings	Suitability for equipment operability for logging areas
	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
8452B: Riley-----	Severe Flooding Low strength	Poorly suited Flooding Low strength Wetness	Moderately suited Low strength
8456B: Ware-----	Moderate Flooding	Moderately suited Flooding	Well suited
8475B: Elsah-----	Moderate Flooding Low strength	Moderately suited Flooding Low strength	Moderately suited Low strength
8589B: Bowdre-----	Moderate Flooding Low strength	Moderately suited Flooding Low strength Stickiness; high plasticity index Wetness	Moderately suited Low strength Stickiness; high plasticity index
8590A: Cairo-----	Severe Flooding Stickiness/slope Low strength	Poorly suited Ponding Flooding Wetness Stickiness; high plasticity index Low strength	Moderately suited Low strength Stickiness; high plasticity index
8597A: Armiesburg-----	Moderate Flooding Low strength	Moderately suited Flooding Low strength	Moderately suited Low strength
8682B: Medway-----	Severe Flooding Low strength	Poorly suited Flooding Low strength	Moderately suited Low strength
MW: Miscellaneous water-	Not rated	Not rated	Not rated
W: Water-----	Not rated	Not rated	Not rated

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Table 10.—Forestland Management, Part II

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
75C: Drury-----	Well suited	Slight
75C3: Drury-----	Well suited	Slight
75D: Drury-----	Well suited	Slight
79B: Menfro-----	Well suited	Slight
79C: Menfro-----	Well suited	Slight
79C2: Menfro-----	Well suited	Slight
79C3: Menfro-----	Well suited	Slight
79D: Menfro-----	Well suited	Slight
79D2: Menfro-----	Well suited	Slight
79D3: Menfro-----	Well suited	Slight
79E: Menfro-----	Poorly suited Slope	Slight
79E2: Menfro-----	Poorly suited Slope	Slight
79E3: Menfro-----	Poorly suited Slope	Slight
79F: Menfro-----	Poorly suited Slope	Slight
164B: Stoy-----	Well suited	Moderate Root restriction
175A: Lamont-----	Well suited	Slight
175B: Lamont-----	Well suited	Slight
175C: Lamont-----	Well suited	Slight

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
214B: Hosmer-----	Well suited	Moderate Root restriction
214C: Hosmer-----	Well suited	Moderate Root restriction
214C2: Hosmer-----	Well suited	Moderate Root restriction
214C3: Hosmer-----	Well suited	Moderate Root restriction
214D2: Hosmer-----	Well suited	Moderate Root restriction
214D3: Hosmer-----	Well suited	Moderate Root restriction
216D: Stookey-----	Well suited	Slight
216D2: Stookey-----	Well suited	Slight
216E: Stookey-----	Poorly suited Slope	Slight
216E2: Stookey-----	Poorly suited Slope	Slight
216E3: Stookey-----	Poorly suited Slope	Slight
216F: Stookey-----	Poorly suited Slope	Slight
216G: Stookey-----	Unsuited Slope	Moderate Slope
471F: Clarksville-----	Poorly suited Slope	Moderate Somewhat excessive drainage
471G: Clarksville-----	Unsuited Slope	Moderate Somewhat excessive drainage Slope

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
477B: Winfield-----	Well suited	Slight
477C: Winfield-----	Well suited	Slight
477C2: Winfield-----	Well suited	Slight
477C3: Winfield-----	Well suited	Slight
477D2: Winfield-----	Well suited	Slight
477D3: Winfield-----	Well suited	Slight
477E3: Winfield-----	Poorly suited Slope	Slight
477F: Winfield-----	Poorly suited Slope	Slight
717F: Stookey-----	Poorly suited Slope	Slight
Clarksville-----	Poorly suited Slope	Moderate Somewhat excessive drainage
717G: Clarksville-----	Unsuited Slope	Moderate Somewhat excessive drainage Slope
Stookey-----	Unsuited Slope	Moderate Slope
801B: Orthents-----	Well suited	Slight
802D: Orthents-----	Well suited	Slight
832F: Menfro-----	Poorly suited Slope	Slight
Clarksville-----	Poorly suited Slope	Moderate Somewhat excessive drainage
832G: Clarksville-----	Unsuited Slope	Moderate Somewhat excessive drainage Slope

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
832G: Menfro-----	Unsuited Slope	Moderate Slope
833F: Menfro-----	Poorly suited Slope	Slight
Goss-----	Poorly suited Slope	Slight
833G: Goss-----	Unsuited Slope	Moderate Slope
Menfro-----	Unsuited Slope	Moderate Slope
864: Pits, quarries-----	Not rated	Not rated
865: Pits, gravel-----	Not rated	Not rated
1426A: Karnak-----	Unsuited Wetness	Slight
1843A: Bonnie-----	Unsuited Wetness	Slight
Petrolia-----	Unsuited Wetness	Slight
1845A: Darwin-----	Unsuited Wetness	Slight
Jacob-----	Unsuited Wetness	Slight
1846A: Karnak-----	Well suited	Slight
Cape-----	Well suited	Slight
3070L: Beaucoup-----	Well suited	Slight
3071A: Darwin-----	Well suited	Slight
3071L: Darwin-----	Well suited	Slight
3092BL: Sarpy-----	Well suited	Severe Excessively drained Too sandy

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
3108A: Bonnie-----	Well suited	Slight
3162L: Gorham-----	Well suited	Slight
3180L: Dupo-----	Well suited	Moderate Root restriction
3284L: Tice-----	Well suited	Slight
3288L: Petrolia-----	Well suited	Slight
3331A: Haymond-----	Well suited	Slight
3331L: Haymond-----	Well suited	Slight
3333A: Wakeland-----	Well suited	Slight
3333L: Wakeland-----	Well suited	Slight
3334A: Birds-----	Unsuited Wetness	Slight
3334L: Birds-----	Well suited	Slight
3382A: Belknap-----	Well suited	Slight
3420A: Piopolis-----	Well suited	Slight
3422A: Cape-----	Well suited	Slight
3422A+: Cape-----	Well suited	Slight
3426L: Karnak-----	Well suited	Slight
3449L: Armiesburg-----	Well suited	Slight
Sarpy-----	Well suited	Severe Excessively drained Too sandy
3452L: Riley-----	Well suited	Slight

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
3456B: Ware-----	Well suited	Slight
3456BL: Ware-----	Well suited	Slight
3590L: Cairo-----	Unsuited Wetness	Moderate Root restriction
3597L: Armiesburg-----	Well suited	Slight
3682BL: Medway-----	Well suited	Slight
7084A: Okaw-----	Well suited	Moderate Root restriction
7122B: Colp-----	Well suited	Slight
7122C2: Colp-----	Well suited	Slight
7131A: Alvin-----	Well suited	Slight
7131B: Alvin-----	Well suited	Slight
7131C: Alvin-----	Well suited	Slight
7131C2: Alvin-----	Well suited	Slight
7131D2: Alvin-----	Well suited	Slight
7338A: Hurst-----	Well suited	Slight
7338B: Hurst-----	Well suited	Slight
7401A: Okaw-----	Well suited	Moderate Root restriction
7460A: Ginat-----	Well suited	Slight
7462A: Sciotoville-----	Well suited	Moderate Root restriction
7462B: Sciotoville-----	Well suited	Moderate Root restriction

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
7462C2: Sciotoville-----	Well suited	Moderate Root restriction
7462C3: Sciotoville-----	Well suited	Moderate Root restriction
7462D2: Sciotoville-----	Well suited	Moderate Root restriction
7462D3: Sciotoville-----	Well suited	Moderate Root restriction
7463A: Wheeling-----	Well suited	Slight
7463B: Wheeling-----	Well suited	Slight
7463C2: Wheeling-----	Well suited	Slight
7463D3: Wheeling-----	Well suited	Slight
7711A: Hatfield-----	Well suited	Slight
7711B: Hatfield-----	Well suited	Slight
8070A: Beaucoup-----	Well suited	Slight
8071A: Darwin-----	Well suited	Slight
8072A: Sharon-----	Well suited	Slight
8085A: Jacob-----	Well suited	Slight
8092B: Sarpy-----	Well suited	Severe Excessively drained Too sandy
8108A: Bonnie-----	Well suited	Slight
8109A: Raccoon-----	Well suited	Slight
8162A: Gorham-----	Well suited	Slight

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
8175B: Lamont-----	Well suited	Slight
8178A: Ruark-----	Well suited	Slight
8180A: Dupo-----	Well suited	Moderate Root restriction
8184A: Roby-----	Well suited	Slight
8184B: Roby-----	Well suited	Slight
8284A: Tice-----	Well suited	Slight
8288A: Petrolia-----	Well suited	Slight
8331A: Haymond-----	Well suited	Slight
8333A: Wakeland-----	Well suited	Slight
8334A: Birds-----	Well suited	Slight
8382A: Belkanp-----	Well suited	Slight
8420A: Piopolis-----	Well suited	Slight
8422A: Cape-----	Well suited	Slight
8422A+: Cape-----	Well suited	Slight
8426A: Karnak-----	Well suited	Slight
8426A+: Karnak-----	Well suited	Slight
8452A: Riley-----	Well suited	Moderate Root restriction
8452B: Riley-----	Well suited	Moderate Root restriction
8456B: Ware-----	Well suited	Slight

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part II—Continued

Map symbol and soil name	Suitability of mechanized site preparation	Limitation for prescribed burning
	Rating class and limiting features	Rating class and limiting features
8475B: Elsah-----	Well suited	Slight
8589B: Bowdre-----	Well suited	Moderate Root restriction
8590A: Cairo-----	Well suited	Moderate Root restriction
8597A: Armiesburg-----	Well suited	Slight
8682B: Medway-----	Well suited	Slight
MW: Miscellaneous water-	Not rated	Not rated
W: Water-----	Not rated	Not rated

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part III

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
75C: Drury-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
75C3: Drury-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
75D: Drury-----	Severe Slope/erodibility	Poorly suited Slope Low strength
79B: Menfro-----	Moderate Slope/erodibility	Moderately suited Low strength
79C: Menfro-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
79C2: Menfro-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
79C3: Menfro-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
79D: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
79D2: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
79D3: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
79E: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
79E2: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
79E3: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
79F: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
164B: Stoy-----	Moderate Slope/erodibility	Moderately suited Low strength
175A: Lamont-----	Slight	Moderately suited Sandiness
175B: Lamont-----	Slight	Moderately suited Sandiness
175C: Lamont-----	Moderate Slope/erodibility	Moderately suited Sandiness Slope
214B: Hosmer-----	Moderate Slope/erodibility	Moderately suited Low strength
214C: Hosmer-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
214C2: Hosmer-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
214C3: Hosmer-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
214D2: Hosmer-----	Severe Slope/erodibility	Poorly suited Slope Low strength
214D3: Hosmer-----	Severe Slope/erodibility	Poorly suited Slope Low strength
216D: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
216D2: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
216E: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
216E2: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
216E3: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
216F: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
216G: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
471F: Clarksville-----	Severe Slope/erodibility	Poorly suited Slope
471G: Clarksville-----	Severe Slope/erodibility	Poorly suited Slope
477B: Winfield-----	Moderate Slope/erodibility	Moderately suited Low strength
477C: Winfield-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
477C2: Winfield-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
477C3: Winfield-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
477D2: Winfield-----	Severe Slope/erodibility	Poorly suited Slope Low strength

Soil Survey of Alexander County, Illinois

Table 10.—Forestland Management, Part III—Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
477D3: Winfield-----	Severe Slope/erodibility	Poorly suited Slope Low strength
477E3: Winfield-----	Severe Slope/erodibility	Poorly suited Slope Low strength
477F: Winfield-----	Severe Slope/erodibility	Poorly suited Slope Low strength
717F: Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
Clarksville-----	Severe Slope/erodibility	Poorly suited Slope
717G: Clarksville-----	Severe Slope/erodibility	Poorly suited Slope
Stookey-----	Severe Slope/erodibility	Poorly suited Slope Low strength
801B: Orthents-----	Moderate Slope/erodibility	Moderately suited Low strength
802D: Orthents-----	Severe Slope/erodibility	Moderately suited Slope Low strength
832F: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
Clarksville-----	Severe Slope/erodibility	Poorly suited Slope
832G: Clarksville-----	Severe Slope/erodibility	Poorly suited Slope
Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
833F: Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
833F: Goss-----	Severe Slope/erodibility	Poorly suited Slope Low strength
833G: Goss-----	Severe Slope/erodibility	Poorly suited Slope Low strength
Menfro-----	Severe Slope/erodibility	Poorly suited Slope Low strength
864: Pits, quarries-----	Not rated	Not rated
865: Pits, gravel-----	Not rated	Not rated
1426A: Karnak-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
1843A: Bonnie-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
1843A: Petrolia-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
1845A: Darwin-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
Jacob-----	Slight	Poorly suited Ponding Flooding Wetness Stickiness; high plasticity index Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
1846A: Karnak-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
Cape-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3070L: Beaucoup-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3071A: Darwin-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
3071L: Darwin-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
3092BL: Sarpy-----	Moderate Slope/erodibility	Poorly suited Flooding
3108A: Bonnie-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3162L: Gorham-----	Slight	Poorly suited Ponding Flooding Wetness Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
3180L: Dupo-----	Slight	Poorly suited Flooding Wetness Low strength
3284L: Tice-----	Slight	Poorly suited Flooding Wetness Low strength
3288L: Petrolia-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3331A: Haymond-----	Slight	Poorly suited Flooding Low strength
3331L: Haymond-----	Slight	Poorly suited Flooding Low strength
3333A: Wakeland-----	Slight	Poorly suited Flooding Wetness Low strength
3333L: Wakeland-----	Slight	Poorly suited Flooding Wetness Low strength
3334A: Birds-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3334L: Birds-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3382A: Belknap-----	Slight	Poorly suited Flooding Wetness Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
3420A: Piopolis-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3422A: Cape-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3422A+: Cape-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
3426L: Karnak-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
3449L: Armiesburg-----	Slight	Poorly suited Flooding Low strength
Sarpy-----	Slight	Poorly suited Flooding
3452L: Riley-----	Slight	Poorly suited Flooding Low strength Wetness
3456B: Ware-----	Moderate Slope/erodibility	Poorly suited Flooding
3456BL: Ware-----	Moderate Slope/erodibility	Poorly suited Flooding
3590L: Cairo-----	Slight	Poorly suited Ponding Flooding Stickiness; high plasticity index Low strength Wetness

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
3597L: Armiesburg-----	Slight	Poorly suited Flooding Low strength
3682BL: Medway-----	Moderate Slope/erodibility	Poorly suited Flooding Low strength
7084A: Okaw-----	Slight	Poorly suited Ponding Wetness Low strength
7122B: Colp-----	Moderate Slope/erodibility	Moderately suited Low strength
7122C2: Colp-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
7131A: Alvin-----	Slight	Well suited
7131B: Alvin-----	Moderate Slope/erodibility	Well suited
7131C: Alvin-----	Moderate Slope/erodibility	Moderately suited Slope
7131C2: Alvin-----	Moderate Slope/erodibility	Moderately suited Slope
7131D2: Alvin-----	Severe Slope/erodibility	Poorly suited Slope
7338A: Hurst-----	Slight	Moderately suited Low strength Wetness
7338B: Hurst-----	Moderate Slope/erodibility	Moderately suited Low strength Wetness
7401A: Okaw-----	Slight	Poorly suited Ponding Wetness Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
7460A: Ginat-----	Slight	Poorly suited Ponding Wetness Low strength
7462A: Sciotoville-----	Slight	Moderately suited Low strength
7462B: Sciotoville-----	Moderate Slope/erodibility	Moderately suited Low strength
7462C2: Sciotoville-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
7462C3: Sciotoville-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
7462D2: Sciotoville-----	Severe Slope/erodibility	Poorly suited Slope Low strength
7462D3: Sciotoville-----	Severe Slope/erodibility	Poorly suited Slope Low strength
7463A: Wheeling-----	Slight	Moderately suited Low strength
7463B: Wheeling-----	Moderate Slope/erodibility	Moderately suited Low strength
7463C2: Wheeling-----	Moderate Slope/erodibility	Moderately suited Low strength Slope
7463D3: Wheeling-----	Severe Slope/erodibility	Poorly suited Slope Low strength
7711A: Hatfield-----	Slight	Moderately suited Wetness Low strength
7711B: Hatfield-----	Moderate Slope/erodibility	Moderately suited Wetness Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
8070A: Beaucoup-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8071A: Darwin-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
8072A: Sharon-----	Slight	Moderately suited Flooding Low strength
8085A: Jacob-----	Slight	Poorly suited Ponding Flooding Wetness Stickiness; high plasticity index Low strength
8092B: Sarpy-----	Moderate Slope/erodibility	Moderately suited Flooding
8108A: Bonnie-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8109A: Raccoon-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8162A: Gorham-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8175B: Lamont-----	Moderate Slope/erodibility	Moderately suited Flooding Sandiness

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
8178A: Ruark-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8180A: Dupo-----	Slight	Poorly suited Flooding Wetness Low strength
8184A: Roby-----	Slight	Poorly suited Flooding
8184B: Roby-----	Slight	Poorly suited Flooding
8284A: Tice-----	Slight	Poorly suited Flooding Wetness Low strength
8288A: Petrolia-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8331A: Haymond-----	Slight	Moderately suited Flooding Low strength
8333A: Wakeland-----	Slight	Poorly suited Flooding Wetness Low strength
8334A: Birds-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8382A: Belknap-----	Slight	Poorly suited Flooding Wetness Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
8420A: Piopolis-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8422A: Cape-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8422A+: Cape-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8426A: Karnak-----	Slight	Poorly suited Ponding Flooding Wetness Low strength Stickiness; high plasticity index
8426A+: Karnak-----	Slight	Poorly suited Ponding Flooding Wetness Low strength
8452A: Riley-----	Slight	Poorly suited Flooding Low strength Wetness
8452B: Riley-----	Moderate Slope/erodibility	Poorly suited Flooding Low strength Wetness
8456B: Ware-----	Moderate Slope/erodibility	Moderately suited Flooding
8475B: Elsah-----	Slight	Moderately suited Flooding Low strength

Soil Survey of Alexander County, Illinois

Table 10.--Forestland Management, Part III--Continued

Map symbol and soil name	Erosion hazard on roads and trails	Suitability for roads (natural surface)
	Rating and limiting features	Rating and limiting features
8589B: Bowdre-----	Moderate Slope/erodibility	Moderately suited Flooding Low strength Stickiness; high plasticity index Wetness
8590A: Cairo-----	Slight	Poorly suited Ponding Flooding Wetness Stickiness; high plasticity index Low strength
8597A: Armiesburg-----	Slight	Moderately suited Flooding Low strength
8682B: Medway-----	Moderate Slope/erodibility	Poorly suited Flooding Low strength
MW: Miscellaneous water-	Not rated	Not rated
W: Water-----	Not rated	Not rated

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity

(Only the soils suitable for production of commercial trees are listed)

Map symbol and soil name	Potential productivity	
	Common trees	Site index
75C:		
Drury-----	white oak-----	69
	northern red oak---	76
	eastern cottonwood--	100
	pin oak-----	90
75C3:		
Drury-----	white oak-----	61
	northern red oak---	66
	eastern cottonwood--	87
	pin oak-----	79
75D:		
Drury-----	white oak-----	65
	northern red oak---	71
	eastern cottonwood--	94
	pin oak-----	85
79B:		
Menfro-----	white oak-----	82
	northern red oak---	84
79C:		
Menfro-----	white oak-----	75
	northern red oak---	77
79C2:		
Menfro-----	white oak-----	75
	northern red oak---	77
79C3:		
Menfro-----	white oak-----	69
	northern red oak---	71
79D:		
Menfro-----	white oak-----	70
	northern red oak---	71
79D2:		
Menfro-----	white oak-----	70
	northern red oak---	71
79D3:		
Menfro-----	white oak-----	62
	northern red oak---	64
79E:		
Menfro-----	white oak-----	66
	northern red oak---	68
79E2:		
Menfro-----	white oak-----	61
	northern red oak---	62

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
79E3:		
Menfro-----	white oak-----	55
	northern red oak----	56
79F:		
Menfro-----	white oak-----	53
	northern red oak----	54
164B:		
Stoy-----	eastern cottonwood--	109
	northern red oak----	70
	white ash-----	68
	white oak-----	69
	yellow poplar-----	89
175A:		
Lamont-----	white oak-----	77
	northern red oak----	71
175B:		
Lamont-----	white oak-----	76
	northern red oak----	70
175C:		
Lamont-----	white oak-----	74
	northern red oak----	68
214B:		
Hosmer-----	white oak-----	72
	northern red oak----	75
	white ash-----	68
214C:		
Hosmer-----	white oak-----	69
	northern red oak----	72
214C2:		
Hosmer-----	white oak-----	64
	northern red oak----	67
214C3:		
Hosmer-----	northern red oak----	55
	white ash-----	50
	white oak-----	53
214D2:		
Hosmer-----	white oak-----	58
	northern red oak----	61
214D3:		
Hosmer-----	white oak-----	48
	northern red oak----	49
216D:		
Stookey-----	white oak-----	77
	northern red oak----	75
216D2:		
Stookey-----	white oak-----	73
	northern red oak----	70

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
216E:		
Stookey-----	white oak-----	66
	northern red oak----	63
216E2:		
Stookey-----	white oak-----	60
	northern red oak----	58
216E3:		
Stookey-----	white oak-----	54
	northern red oak----	53
216F:		
Stookey-----	white oak-----	53
	northern red oak----	47
216G:		
Stookey-----	white oak-----	42
	northern red oak----	41
471F:		
Clarksville-----	white oak-----	52
	northern red oak----	62
471G:		
Clarksville-----	white oak-----	30
	northern red oak----	35
477B:		
Winfield-----	white oak-----	76
	northern red oak----	79
477C:		
Winfield-----	white oak-----	75
	northern red oak----	78
477C2:		
Winfield-----	white oak-----	71
	northern red oak----	74
477C3:		
Winfield-----	white oak-----	65
	northern red oak----	67
477D2:		
Winfield-----	white oak-----	66
	northern red oak----	68
477D3:		
Winfield-----	white oak-----	59
	northern red oak----	61
477E3:		
Winfield-----	white oak-----	52
	northern red oak----	54
477F:		
Winfield-----	white oak-----	49
	northern red oak----	51

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
717F:		
Stookey-----	white oak-----	54
	northern red oak----	53
Clarksville-----	white oak-----	52
	northern red oak----	62
717G:		
Clarksville-----	white oak-----	30
	northern red oak----	35
Stookey-----	white oak-----	40
	northern red oak----	39
801B. Orthents		
802D. Orthents		
832F:		
Menfro-----	white oak-----	53
	northern red oak----	54
Clarksville-----	white oak-----	30
	northern red oak----	35
	eastern cottonwood--	---
	pin oak-----	---
832G:		
Clarksville-----	white oak-----	30
	northern red oak----	35
Menfro-----	white oak-----	39
	northern red oak----	40
833F:		
Menfro-----	white oak-----	53
	northern red oak----	54
Goss-----	white oak-----	42
	northern red oak----	51
833G:		
Goss-----	white oak-----	31
	northern red oak----	38
Menfro-----	white oak-----	39
	northern red oak----	40
864. Pits, quarries		
865. Pits, gravel		
1426A:		
Karnak-----	eastern cottonwood--	86
	pin oak-----	78

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
1843A:		
Bonnie-----	eastern cottonwood--	88
	pin oak-----	80
Petrolia-----	eastern cottonwood--	88
	pin oak-----	80
1845A:		
Darwin-----	eastern cottonwood--	87
	pin oak-----	79
Jacob-----	eastern cottonwood--	87
	pin oak-----	79
1846A:		
Karnak-----	eastern cottonwood--	88
	pin oak-----	80
Cape-----	eastern cottonwood--	88
	pin oak-----	80
3070L:		
Beaucoup-----	eastern cottonwood--	97
	pin oak-----	87
3071A:		
Darwin-----	eastern cottonwood--	88
	pin oak-----	80
3071L:		
Darwin-----	eastern cottonwood--	88
	pin oak-----	80
3092BL:		
Sarpy-----	eastern cottonwood--	94
	pin oak-----	85
3108A:		
Bonnie-----	eastern cottonwood--	100
	pin oak-----	90
3162L:		
Gorham-----	eastern cottonwood--	97
	pin oak-----	88
3180L:		
Dupo-----	eastern cottonwood--	102
	pin oak-----	92
3284L:		
Tice-----	eastern cottonwood--	97
	pin oak-----	87
3288L:		
Petrolia-----	eastern cottonwood--	97
	pin oak-----	87
3331A:		
Haymond-----	eastern cottonwood--	110
	pin oak-----	99

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
3331L: Haymond-----	eastern cottonwood-- pin oak-----	110 99
3333A: Wakeland-----	eastern cottonwood-- pin oak-----	99 90
3333L: Wakeland-----	eastern cottonwood-- pin oak-----	99 90
3334A: Birds-----	eastern cottonwood-- pin oak-----	99 90
3334L: Birds-----	eastern cottonwood-- pin oak-----	100 92
3382A: Belknap-----	eastern cottonwood-- pin oak-----	102 92
3420A: Piopolis-----	eastern cottonwood-- pin oak-----	95 86
3422A: Cape-----	eastern cottonwood-- pin oak-----	91 83
3422A+: Cape-----	eastern cottonwood-- pin oak-----	91 83
3426L: Karnak-----	eastern cottonwood-- pin oak-----	84 76
3449L: Armiesburg-----	eastern cottonwood-- pin oak-----	102 91
Sarpy-----	eastern cottonwood-- pin oak-----	94 85
3452L: Riley-----	eastern cottonwood-- pin oak-----	98 88
3456B: Ware-----	eastern cottonwood-- pin oak-----	103 93
3456BL: Ware-----	eastern cottonwood-- pin oak-----	71 64

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
3590L:		
Cairo-----	eastern cottonwood--	97
	pin oak-----	87
3597L:		
Armiesburg-----	eastern cottonwood--	109
	pin oak-----	97
3682BL:		
Medway-----	eastern cottonwood--	100
	pin oak-----	90
7084A:		
Okaw-----	eastern cottonwood--	101
	pin oak-----	91
7122B:		
Colp-----	white oak-----	70
	northern red oak---	74
	eastern cottonwood--	104
	pin oak-----	94
7122C2:		
Colp-----	eastern cottonwood--	93
	northern red oak---	66
	white ash-----	62
	white oak-----	62
7131A:		
Alvin-----	white oak-----	80
	northern red oak---	82
	eastern cottonwood--	102
	pin oak-----	92
7131B:		
Alvin-----	white oak-----	78
	northern red oak---	80
	eastern cottonwood--	100
	pin oak-----	90
7131C:		
Alvin-----	white oak-----	77
	northern red oak---	79
	eastern cottonwood--	98
	pin oak-----	88
7131C2:		
Alvin-----	white oak-----	74
	northern red oak---	75
	eastern cottonwood--	94
	pin oak-----	85
7131D2:		
Alvin-----	white oak-----	68
	northern red oak---	70
	eastern cottonwood--	87
	pin oak-----	78

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
7338A:		
Hurst-----	white oak-----	70
	northern red oak---	73
	eastern cottonwood--	105
	pin oak-----	94
7338B:		
Hurst-----	white oak-----	69
	northern red oak---	72
	eastern cottonwood--	103
	pin oak-----	92
7401A:		
Okaw-----	white oak-----	---
	northern red oak---	---
	eastern cottonwood--	102
	pin oak-----	92
7460A:		
Ginat-----	white oak-----	73
	northern red oak---	79
	eastern cottonwood--	94
	pin oak-----	85
7462A:		
Sciotoville-----	white oak-----	79
	northern red oak---	74
	eastern cottonwood--	105
	pin oak-----	94
7462B:		
Sciotoville-----	white oak-----	78
	northern red oak---	73
	eastern cottonwood--	104
	pin oak-----	93
7462C2:		
Sciotoville-----	white oak-----	73
	northern red oak---	68
	eastern cottonwood--	97
	pin oak-----	87
7462C3:		
Sciotoville-----	white oak-----	66
	northern red oak---	62
	eastern cottonwood--	88
	pin oak-----	83
7462D2:		
Sciotoville-----	white oak-----	66
	northern red oak---	62
	eastern cottonwood--	88
	pin oak-----	79
7462D3:		
Sciotoville-----	white oak-----	60
	northern red oak---	56
	eastern cottonwood--	80
	pin oak-----	71

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
7463A:		
Wheeling-----	white oak-----	76
	northern red oak---	81
	eastern cottonwood--	101
	pin oak-----	91
7463B:		
Wheeling-----	white oak-----	75
	northern red oak---	80
	eastern cottonwood--	100
	pin oak-----	90
7463C2:		
Wheeling-----	white oak-----	70
	northern red oak---	75
	eastern cottonwood--	93
	pin oak-----	84
7463D3:		
Wheeling-----	white oak-----	58
	northern red oak---	62
	eastern cottonwood--	77
	pin oak-----	69
7711A:		
Hatfield-----	white oak-----	74
	northern red oak---	71
	eastern cottonwood--	71
	pin oak-----	85
7711B:		
Hatfield-----	white oak-----	73
	northern red oak---	70
	eastern cottonwood--	70
	pin oak-----	84
8070A:		
Beaucoup-----	eastern cottonwood--	97
	pin oak-----	87
8071A:		
Darwin-----	eastern cottonwood--	88
	pin oak-----	80
8072A:		
Sharon-----	eastern cottonwood--	103
	pin oak-----	93
8085A:		
Jacob-----	eastern cottonwood--	85
	pin oak-----	77
8092B:		
Sarpy-----	eastern cottonwood--	92
	pin oak-----	83
8108A:		
Bonnie-----	eastern cottonwood--	100
	pin oak-----	90

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
8109A: Raccoon-----	eastern cottonwood--	103
	pin oak-----	93
8162A: Gorham-----	eastern cottonwood--	97
	pin oak-----	88
8175B: Lamont-----	white oak-----	76
	northern red oak---	70
	eastern cottonwood--	101
	pin oak-----	91
8178A: Ruark-----	white oak-----	73
	northern red oak---	73
	eastern cottonwood--	92
	pin oak-----	84
8180A: Dupo-----	eastern cottonwood--	102
	pin oak-----	92
8184A: Roby-----	eastern cottonwood--	102
	pin oak-----	92
8184B: Roby-----	white oak-----	73
	northern red oak---	73
	eastern cottonwood--	92
	pin oak-----	84
8284A: Tice-----	eastern cottonwood--	97
	pin oak-----	87
8288A: Petrolia-----	eastern cottonwood--	97
	pin oak-----	87
8331A: Haymond-----	eastern cottonwood--	110
	pin oak-----	99
8333A: Wakeland-----	eastern cottonwood--	99
	pin oak-----	90
8334A: Birds-----	eastern cottonwood--	102
	pin oak-----	92
8382A: Belknap-----	eastern cottonwood--	102
	pin oak-----	92
8420A: Piopolis-----	eastern cottonwood--	95
	pin oak-----	86

Soil Survey of Alexander County, Illinois

Table 11.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity	
	Common trees	Site index
8422A:		
Cape-----	eastern cottonwood--	91
	pin oak-----	83
8422A+:		
Cape-----	eastern cottonwood--	91
	pin oak-----	83
8426A:		
Karnak-----	eastern cottonwood--	84
	pin oak-----	76
8426A+:		
Karnak-----	eastern cottonwood--	84
	pin oak-----	76
8452A:		
Riley-----	eastern cottonwood--	83
	pin oak-----	75
8452B:		
Riley-----	eastern cottonwood--	96
	pin oak-----	86
8456B:		
Ware-----	eastern cottonwood--	102
	pin oak-----	92
8475B:		
Elsah-----	eastern cottonwood--	97
	pin oak-----	87
8589B:		
Bowdre-----	eastern cottonwood--	105
	pin oak-----	94
8590A:		
Cairo-----	eastern cottonwood--	97
	pin oak-----	87
8597A:		
Armiesburg-----	eastern cottonwood--	109
	pin oak-----	97
8682B:		
Medway-----	eastern cottonwood--	101
	pin oak-----	91
MW. Miscellaneous water		
W. Water		

Table 12.—Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
75C: Drury-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
75C3: Drury-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
75D: Drury-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79B: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
79C: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79C2: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79C3: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79D: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
79D2: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79D3: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79E: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79E2: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
79E3: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
79F: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
164B: Stoy-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple	Carolina poplar, eastern cottonwood, pin oak
175A: Lamont-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
175B: Lamont-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
175C: Lamont-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
214B: Hosmer-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
214C: Hosmer-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
214C2: Hosmer-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
214C3: Hosmer-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
214D2: Hosmer-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
214D3: Hosmer-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinquapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
216D: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
216D2: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
216E: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
216E2: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
216E3: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
216F: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
216G: Stookey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
471F: Clarksville-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
471G: Clarksville-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
477B: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
477C: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
477C2: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
477C3: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
477D2: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
477D3: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
477E3: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
477F: Winfield-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
717F: Stokey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
Clarksville-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
717G: Clarksville-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
Stokey-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.-Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
801B: Orthents-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
802D: Orthents-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
832F: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
Clarksville-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
832G: Clarksville-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
832G: Menfro-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
833G: Goss-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
864. Pits, quarries					
865. Pits, gravel					
1426A: Karnak-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
1843A: Bonnie-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
Petrolia-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
1845A: Darwin-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
Jacob-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
1846A: Karnak-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
1846A: Cape-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3070L: Beaucoup-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3071A: Darwin-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3071L: Darwin-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3092BL: Sarpy-----	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinquapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	black oak, common hackberry, eastern white pine	Carolina poplar	---
3108A: Bonnie-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
3162L: Gorham-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak
3180L: Dupo-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum
3284L: Tice-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum
				Carolina poplar, eastern cottonwood, pin oak
				Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3288L: Petrolia-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3331A: Haymond-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
3331L: Haymond-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
3333A: Wakeland-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3333L: Wakeland-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3334A: Birds-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3334L: Birds-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3382A: Belknap-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3420A: Piopolis-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3422A: Cape-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3422A+: Cape-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3426L: Karnak-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
3449L: Armiesburg-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, sweet gum, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
Sarpy-----	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	black oak, common hackberry, eastern white pine, pecan	Carolina poplar	---

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3597L: Armiesburg-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
3682BL: Medway-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
7084A: Okaw-----	American Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cocksbur pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, pin oak
7122B: Colp-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinquapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
7122C2: Colp-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
7131A: Alvin-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
7131B: Alvin-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
7131C: Alvin-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
7131C2: Alvin-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree
7131D2: Alvin-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree
7338A: Hurst-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum
7338B: Hurst-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum
				Carolina poplar, eastern white pine
				Carolina poplar, eastern white pine
				Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
7401A: Okaw-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
7462A: Sciotoville-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinquapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinquapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
7462B: Sciotoville-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
7462C2: Sciotoville-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
7462C3: Sciotoville-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
7462D2: Sciotoville-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokeberry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
7462D3: Sciotoville-----	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokeberry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar	Norway spruce	Carolina poplar
7463A: Wheeling-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokeberry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine
7463B: Wheeling-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokeberry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
7463C2: Wheeling-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
7463D3: Wheeling-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak,
7711A: Hatfield-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum
7711B: Hatfield-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum
				Carolina poplar, eastern cottonwood, eastern white pine
				Carolina poplar, eastern cottonwood, eastern white pine
				Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8070A: Beaucoup-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8071A: Darwin-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8072A: Sharon-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8085A: Jacob-----	black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8092B: Sarpy-----	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	black oak, common hackberry, eastern white pine	Carolina poplar	---
8108A: Bonnie-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8109A: Raccoon-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8162A: Gorham-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8175B: Lamont-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
8178A: Ruark-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8180A: Dupo-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8184A: Roby-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8184B: Roby-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8284A: Tice-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8288A: Petrolia-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8331A: Haymond-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
8333A: Wakeland-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8334A: Birds-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8382A: Belknap-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8420A: Piopolis-----	American cranberrybush, American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8422A: Cape-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8422A+: Cape-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8426A: Karnak-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8426A+: Karnak-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8452A: Riley-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8452B: Riley-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8456B: Ware-----	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8475B: Elsah-----	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	bur oak, chinkapin oak, thornless honeylocust	---	---
8589B: Bowdre-----	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, swamp white oak, red maple, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8590A: Cairo-----	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	sweetgum, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
8597A: Armiesburg-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokeberry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine

Table 12.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8682B: Medway-----	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, tuliptree, northern red oak, pin oak	Carolina poplar, eastern cottonwood, eastern white pine
MW. Miscellaneous water					
W. Water					

Table 13.—Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for further explanation of ratings in this table)

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
75C: Drury-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
75C3: Drury-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
75D: Drury-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
79B: Menfro-----	Not limited	Not limited	Somewhat limited: slope.	Not limited	Not limited
79C: Menfro-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
79C2: Menfro-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
79C3: Menfro-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
79D: Menfro-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
79D2: Menfro-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
79D3: Menfro-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
79E: Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
79E2: Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
79E3: Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
79F: Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.
164B: Stoy-----	Somewhat limited: slow water movement, depth to saturated zone.	Somewhat limited: slow water movement, depth to saturated zone.	Somewhat limited: slow water movement, slope, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone.
175A: Lamont-----	Somewhat limited: too sandy.	Somewhat limited: too sandy.	Somewhat limited: too sandy.	Somewhat limited: too sandy.	Not limited
175B: Lamont-----	Somewhat limited: too sandy.	Somewhat limited: too sandy.	Somewhat limited: slope, too sandy.	Somewhat limited: too sandy.	Not limited
175C: Lamont-----	Somewhat limited: too sandy, slope.	Somewhat limited: too sandy, slope.	Very limited: slope, too sandy.	Somewhat limited: too sandy.	Somewhat limited: slope.
214B: Hosmer-----	Somewhat limited: depth to cemented pan.	Somewhat limited: depth to cemented pan.	Somewhat limited: depth to cemented pan, slope.	Not limited	Somewhat limited: depth to cemented pan.
214C: Hosmer-----	Somewhat limited: depth to cemented pan, slope.	Somewhat limited: depth to cemented pan, slope.	Very limited: slope, depth to cemented pan.	Not limited	Somewhat limited: depth to cemented pan, slope.
214C2: Hosmer-----	Somewhat limited: depth to cemented pan, slope.	Somewhat limited: depth to cemented pan, slope.	Very limited: slope, depth to cemented pan.	Not limited	Somewhat limited: depth to cemented pan, slope.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
214C3: Hosmer-----	Very limited: slow water movement, depth to cemented pan, slope.	Very limited: slow water movement, depth to cemented pan, slope.	Very limited: slow water movement, slope, depth to cemented pan.	Not limited	Somewhat limited: depth to cemented pan, slope.
214D2: Hosmer-----	Somewhat limited: slope, depth to cemented pan.	Somewhat limited: slope, depth to cemented pan.	Very limited: slope, depth to cemented pan.	Very limited: water erosion.	Somewhat limited: slope, depth to cemented pan.
214D3: Hosmer-----	Somewhat limited: slope, depth to cemented pan.	Somewhat limited: slope, depth to cemented pan.	Very limited: slope, depth to cemented pan.	Very limited: water erosion.	Somewhat limited: slope, depth to cemented pan.
216D: Stookey-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
216D2: Stookey-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
216E: Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
216E2: Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
216E3: Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
216F: Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.
216G: Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
471F: Clarksville-----	Very limited: slope.	Very limited: slope.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, large stones content.
471G: Clarksville-----	Very limited: slope.	Very limited: slope.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, large stones content.
477B: Winfield-----	Not limited	Not limited	Somewhat limited: slope.	Not limited	Not limited
477C: Winfield-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
477C2: Winfield-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
477C3: Winfield-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
477D2: Winfield-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
477D3: Winfield-----	Somewhat limited: slope.	Somewhat limited: slope.	Very limited: slope.	Very limited: water erosion.	Somewhat limited: slope.
477E3: Winfield-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
477F: Winfield-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.
717F: Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
Clarksville-----	Very limited: slope.	Very limited: slope.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, large stones content.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
717G: Clarksville-----	Very limited: slope.	Very limited: slope.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, large stones content.
Stookey-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.
801B: Orthents-----	Not limited	Not limited	Somewhat limited: slope.	Not limited	Not limited
802D: Orthents-----	Somewhat limited: slope, slow water movement.	Somewhat limited: slope, slow water movement.	Very limited: slope, slow water movement.	Very limited: water erosion.	Somewhat limited: slope.
832F: Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
Clarksville-----	Very limited: slope.	Very limited: slope.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, large stones content.
832G: Clarksville-----	Very limited: slope.	Very limited: slope.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, large stones content.
Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.
833F: Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: water erosion, slope.	Very limited: slope.
Goss-----	Very limited: slope, gravel content.	Very limited: slope, gravel content.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, droughty, gravel content, large stones content.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
833G: Goss-----	Very limited: slope, gravel content.	Very limited: slope, gravel content.	Very limited: slope, gravel content.	Very limited: slope.	Very limited: slope, droughty, gravel content, large stones content.
Menfro-----	Very limited: slope.	Very limited: slope.	Very limited: slope.	Very limited: slope, water erosion.	Very limited: slope.
864: Pits, quarries-----	Not rated-----	Not rated-----	Not rated-----	Not rated-----	Not rated.
865: Pits, gravel-----	Not rated-----	Not rated-----	Not rated-----	Not rated-----	Not rated.
1426A: Karnak-----	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: ponding, depth to saturated zone, too clayey, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey.
1843A: Bonnie-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
Petrolia-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
1845A: Darwin-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: ponding, depth to saturated zone, slow water movement, too clayey, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey.
Jacob-----	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: too clayey, ponding, depth to saturated zone, slow water movement, flooding.	Very limited: depth to saturated zone, too clayey, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, too clayey, ponding, flooding.	Very limited: too clayey, ponding, flooding, depth to saturated zone.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
1846A: Karnak-----	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: ponding, depth to saturated zone, too clayey, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey.
Cape-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3070L: Beaucoup-----	Very limited: depth to saturated zone, flooding, ponding.	Very limited: ponding, depth to saturated zone, flooding.	Very limited: depth to saturated zone, flooding, ponding.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3071A: Darwin-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: ponding, depth to saturated zone, slow water movement, too clayey, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey.
3071L: Darwin-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: ponding, depth to saturated zone, slow water movement, too clayey, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey.
3092BL: Sary-----	Very limited: flooding, too sandy.	Somewhat limited: too sandy, flooding.	Very limited: flooding, slope, too sandy.	Somewhat limited: too sandy, flooding.	Very limited: flooding, droughty.
3108A: Bonnie-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: flooding, depth to saturated zone, ponding.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
3162L: Gorham-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3180L: Dupo-----	Very limited: depth to saturated zone, flooding, slow water movement.	Somewhat limited: slow water movement, depth to saturated zone, flooding.	Very limited: depth to saturated zone, flooding, slow water movement.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.
3284L: Tice-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.
3288L: Petrolia-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3331A: Haymond-----	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.
3331L: Haymond-----	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.
3333A: Wakeland-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.
3333L: Wakeland-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.
3334A: Birds-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
3334L: Birds-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3382A: Belknap-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.
3420A: Piopolis-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: flooding, depth to saturated zone, ponding.
3422A: Cape-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3422A+: Cape-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
3426L: Karnak-----	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: ponding, depth to saturated zone, too clayey, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey.
3449L: Armiesburg-----	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.
Sarpy-----	Very limited: flooding, too sandy.	Somewhat limited: too sandy, flooding.	Very limited: flooding, too sandy.	Somewhat limited: too sandy, flooding.	Very limited: flooding, droughty.

Soil Survey of Alexander County, Illinois

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
3452L: Riley-----	Very limited: flooding, depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.	Very limited: flooding, depth to saturated zone.
3456B: Ware-----	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding, slope.	Somewhat limited: flooding.	Very limited: flooding.
3456BL: Ware-----	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding, slope.	Somewhat limited: flooding.	Very limited: flooding.
3590L: Cairo-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: ponding, depth to saturated zone, slow water movement, too clayey, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: depth to saturated zone, ponding, too clayey, flooding.	Very limited: ponding, flooding, depth to saturated zone, too clayey, droughty.
3597L: Armiesburg-----	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.	Somewhat limited: flooding.	Very limited: flooding.
3682BL: Medway-----	Very limited: flooding, depth to saturated zone.	Somewhat limited: flooding, depth to saturated zone.	Very limited: flooding, slope, depth to saturated zone.	Somewhat limited: flooding.	Very limited: flooding, depth to saturated zone.
7084A: Okaw-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone.
7122B: Colp-----	Very limited: flooding, slow water movement.	Somewhat limited: slow water movement.	Somewhat limited: slow water movement, slope.	Not limited	Not limited
7122C2: Colp-----	Very limited: flooding, slow water movement.	Somewhat limited: slow water movement.	Very limited: slope, slow water movement.	Not limited	Not limited
7131A: Alvin-----	Very limited: flooding.	Not limited	Not limited	Not limited	Not limited

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
7131B: Alvin-----	Very limited: flooding.	Not limited	Somewhat limited: slope.	Not limited	Not limited
7131C: Alvin-----	Very limited: flooding, slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
7131C2: Alvin-----	Very limited: flooding, slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
7131D2: Alvin-----	Very limited: flooding, slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
7338A: Hurst-----	Very limited: flooding, slow water movement, depth to saturated zone.	Very limited: slow water movement, depth to saturated zone.	Very limited: slow water movement, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone.
7338B: Hurst-----	Very limited: flooding, slow water movement, depth to saturated zone.	Very limited: slow water movement, depth to saturated zone.	Very limited: slow water movement, slope, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone.
7401A: Okaw-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone.
7460A: Ginat-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone.
7462A: Sciotoville-----	Very limited: flooding, slow water movement, depth to saturated zone.	Somewhat limited: slow water movement, depth to saturated zone.	Somewhat limited: slow water movement, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone.

Soil Survey of Alexander County, Illinois

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
7462B: Sciotoville-----	Very limited: flooding, slow water movement, depth to saturated zone.	Somewhat limited: slow water movement, depth to saturated zone.	Somewhat limited: slope, slow water movement, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone.
7462C2: Sciotoville-----	Very limited: flooding, slow water movement, depth to saturated zone, slope.	Somewhat limited: slow water movement, depth to saturated zone, slope.	Very limited: slope, slow water movement, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone, slope.
7462C3: Sciotoville-----	Very limited: flooding, slow water movement, depth to saturated zone, slope.	Somewhat limited: slow water movement, depth to saturated zone, slope.	Very limited: slope, slow water movement, depth to saturated zone.	Not limited	Somewhat limited: depth to saturated zone, slope.
7462D2: Sciotoville-----	Very limited: flooding, slope, slow water movement, depth to saturated zone.	Somewhat limited: slope, slow water movement, depth to saturated zone.	Very limited: slope, slow water movement, depth to saturated zone.	Very limited: water erosion.	Somewhat limited: slope, depth to saturated zone.
7462D3: Sciotoville-----	Very limited: flooding, slope, slow water movement, depth to saturated zone.	Somewhat limited: slope, slow water movement, depth to saturated zone.	Very limited: slope, slow water movement, depth to saturated zone.	Very limited: water erosion.	Somewhat limited: slope, depth to saturated zone.
7463A: Wheeling-----	Very limited: flooding.	Not limited	Not limited	Not limited	Not limited
7463B: Wheeling-----	Very limited: flooding.	Not limited	Somewhat limited: slope.	Not limited	Not limited
7463C2: Wheeling-----	Very limited: flooding, slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.
7463D3: Wheeling-----	Very limited: flooding, slope.	Somewhat limited: slope.	Very limited: slope.	Not limited	Somewhat limited: slope.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
7711A: Hatfield-----	Very limited: depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, slow water movement.	Very limited: slow water movement, depth to saturated zone.	Very limited: depth to saturated zone.	Very limited: depth to saturated zone.
7711B: Hatfield-----	Very limited: depth to saturated zone, flooding, slow water movement.	Very limited: depth to saturated zone, slow water movement.	Very limited: slow water movement, depth to saturated zone, slope.	Very limited: depth to saturated zone.	Very limited: depth to saturated zone.
8070A: Beaucoup-----	Very limited: depth to saturated zone, flooding, ponding.	Very limited: ponding, depth to saturated zone.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8071A: Darwin-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: ponding, depth to saturated zone, slow water movement, too clayey.	Very limited: depth to saturated zone, ponding, slow water movement, too clayey, flooding.	Very limited: depth to saturated zone, ponding, too clayey.	Very limited: ponding, depth to saturated zone, too clayey, flooding.
8072A: Sharon-----	Very limited: flooding.	Not limited	Somewhat limited: flooding.	Not limited	Somewhat limited: flooding.
8085A: Jacob-----	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: too clayey, ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, too clayey, ponding, slow water movement, flooding.	Very limited: depth to saturated zone, too clayey, ponding.	Very limited: too clayey, ponding, depth to saturated zone, flooding.
8092B: Sarpy-----	Very limited: flooding, too sandy.	Somewhat limited: too sandy.	Somewhat limited: slope, too sandy, flooding.	Somewhat limited: too sandy.	Somewhat limited: droughty, flooding.
8108A: Bonnie-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, flooding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
8109A: Racon-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement, flooding.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8162A: Gorham-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, flooding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8175B: Lamont-----	Very limited: flooding, too sandy.	Somewhat limited: too sandy.	Somewhat limited: slope, flooding, too sandy.	Somewhat limited: too sandy.	Somewhat limited: flooding.
8178A: Ruark-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, flooding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8180A: Dupo-----	Very limited: depth to saturated zone, flooding, slow water movement.	Somewhat limited: slow water movement, depth to saturated zone.	Very limited: depth to saturated zone, slow water movement, flooding.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.
8184A: Roby-----	Very limited: flooding, depth to saturated zone, too sandy.	Somewhat limited: depth to saturated zone, too sandy.	Somewhat limited: flooding, depth to saturated zone, too sandy.	Somewhat limited: too sandy.	Somewhat limited: flooding, depth to saturated zone.
8184B: Roby-----	Very limited: flooding, depth to saturated zone, too sandy.	Somewhat limited: depth to saturated zone, too sandy.	Somewhat limited: flooding, slope, depth to saturated zone, too sandy.	Somewhat limited: too sandy.	Somewhat limited: flooding, depth to saturated zone.
8284A: Tice-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
8288A: Petrolia-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, flooding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8331A: Haymond-----	Very limited: flooding.	Not limited	Somewhat limited: flooding.	Not limited	Somewhat limited: flooding.
8333A: Wakeland-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.
8334A: Birds-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, flooding, slow water movement.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8382A: Belknap-----	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Very limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.
8420A: Piopolis-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement, flooding.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8422A: Cape-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.
8422A+: Cape-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement, flooding.	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: depth to saturated zone, ponding, flooding.	Very limited: ponding, flooding, depth to saturated zone.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
8426A: Karnak-----	Very limited: depth to saturated zone, flooding, ponding, too clayey, slow water movement.	Very limited: ponding, depth to saturated zone, too clayey, slow water movement.	Very limited: depth to saturated zone, ponding, too clayey, slow water movement, flooding.	Very limited: depth to saturated zone, ponding, too clayey.	Very limited: ponding, depth to saturated zone, too clayey, flooding.
8426A+: Karnak-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement.	Very limited: ponding, depth to saturated zone, slow water movement.	Very limited: depth to saturated zone, ponding, slow water movement, flooding.	Very limited: depth to saturated zone, ponding.	Very limited: ponding, depth to saturated zone, flooding.
8452A: Riley-----	Very limited: flooding, depth to saturated zone.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding, droughty.
8452B: Riley-----	Very limited: flooding, depth to saturated zone.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding, slope.	Somewhat limited: depth to saturated zone.	Somewhat limited: depth to saturated zone, flooding, droughty.
8456B: Ware-----	Very limited: flooding.	Not limited	Somewhat limited: flooding, slope.	Not limited	Somewhat limited: flooding.
8475B: Elsah-----	Very limited: flooding.	Not limited	Somewhat limited: flooding, slope.	Not limited	Somewhat limited: flooding.
8589B: Bowdre-----	Very limited: flooding, too clayey, slow water movement, depth to saturated zone.	Very limited: too clayey, slow water movement, depth to saturated zone.	Very limited: too clayey, slow water movement, depth to saturated zone, flooding, slope.	Very limited: too clayey, depth to saturated zone.	Very limited: too clayey, flooding, depth to saturated zone, droughty.
8590A: Cairo-----	Very limited: depth to saturated zone, flooding, ponding, slow water movement, too clayey.	Very limited: ponding, depth to saturated zone, slow water movement, too clayey.	Very limited: depth to saturated zone, ponding, slow water movement, too clayey, flooding.	Very limited: depth to saturated zone, ponding, too clayey.	Very limited: ponding, depth to saturated zone, too clayey, flooding, droughty.

Table 13.—Recreation—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Lawns, landscaping, and golf fairways
8597A: Armiesburg-----	Very limited: flooding.	Not limited	Somewhat limited: flooding.	Not limited	Somewhat limited: flooding.
8682B: Medway-----	Very limited: flooding, depth to saturated zone.	Somewhat limited: flooding, depth to saturated zone.	Very limited: flooding, slope, depth to saturated zone.	Somewhat limited: flooding.	Very limited: flooding, depth to saturated zone.
MW: Miscellaneous water-	Not rated-----	Not rated-----	Not rated-----	Not rated-----	Not rated.
W: Water-----	Not rated-----	Not rated-----	Not rated-----	Not rated-----	Not rated.

Table 14.—Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
75C: Drury-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
75C3: Drury-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
75D: Drury-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79B: Menfro-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
79C: Menfro-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79C2: Menfro-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79C3: Menfro-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79D: Menfro-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79D2: Menfro-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79D3: Menfro-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
79E: Menfro-----	Good	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.

Table 14.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
79E2: Menfro-----	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
79E3: Menfro-----	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
79F: Menfro-----	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
164B: Stoy-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
175A: Lamont-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
175B: Lamont-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
175C: Lamont-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
214B: Hosmer-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214C: Hosmer-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214C2: Hosmer-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214C3: Hosmer-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
214D2: Hosmer-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
214D3: Hosmer-----	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
216D: Stookey-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
216D2: Stookey-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
216E: Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
216E2: Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
216E3: Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
216F: Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
216G: Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
471F: Clarksville-----	Very poor.	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
471G: Clarksville-----	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
477B: Winfield-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
477C: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
477C2: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 14.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
477C3: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
477D2: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
477D3: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
477E3: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
477F: Winfield-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
717F: Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Clarksville-----	Very poor.	Poor	Fair	Good	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
717G: Clarksville-----	Very poor.	Poor	Fair	Good	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Stookey-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
801B: Orthents-----	Good	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
802D: Orthents-----	Fair	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
832F: Menfro-----	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Clarksville-----	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	for--
832G: Clarksville-----	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.	
Menfro-----	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.	
833F: Menfro-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.	
Goss-----	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.	
833G: Goss-----	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.	
Menfro-----	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.	
864. Pits, quarries											
865. Pits, gravel											
1426A: Karnak-----	Very poor.	Very poor.	Very poor.	Fair	Fair	Good	Good	Very poor.	Poor	Good.	
1843A: Bonnie-----	Poor	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.	
Petrolia-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	
1845A: Darwin-----	Poor	Poor	Fair	Poor	Poor	Good	Good	Poor	Poor	Good.	
Jacob-----	Very poor.	Poor	Poor	Fair	Very poor.	Fair	Good	Poor	Fair	Good.	
1846A: Karnak-----	Very poor.	Very poor.	Very poor.	Poor	Poor	Good	Good	Very poor.	Poor	Good.	
Cape-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	

Table 14.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
3070L: Beaucoup-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3071A: Darwin-----	Poor	Poor	Fair	Poor	Poor	Good	Good	Poor	Poor	Good.
3071L: Darwin-----	Poor	Poor	Fair	Poor	Poor	Good	Good	Poor	Poor	Good.
3092BL: Sarpy-----	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
3108A: Bonnie-----	Poor	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
3162L: Gorham-----	Good	Poor	Poor	Poor	Poor	Good	Good	Good	Good	Good.
3180L: Dupo-----	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3284L: Tice-----	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3288L: Petrolia-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3331A: Haymond-----	Good	Good	Fair	Good	Good	Poor	Poor	Good	Good	Poor.
3331L: Haymond-----	Good	Good	Fair	Good	Good	Poor	Poor	Good	Good	Poor.
3333A: Wakeland-----	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3333L: Wakeland-----	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
3334A: Birds-----	Good	Fair	Good	Good	Fair	Good	Good	Good	Good	Good.
3334L: Birds-----	Good	Fair	Good	Good	Fair	Good	Good	Good	Good	Good.
3382A: Belknap-----	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements						Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
3420A: Piopolis-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3422A: Cape-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3422A+: Cape-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3426L: Karnak-----	Very poor.	Poor	Poor	Fair	Very poor.	Good	Good	Poor	Fair	Good.
3449L: Armiesburg-----	Poor	Fair	Good	Good	Good	Poor	Poor	Fair	Good	Poor.
Sarpy-----	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
3452L: Riley-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
3456B: Ware-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
3456BL: Ware-----	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Fair.
3590L: Cairo-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3597L: Armiesburg-----	Poor	Fair	Good	Good	Good	Poor	Poor	Fair	Good	Poor.
3682BL: Medway-----	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
7084A: Okaw-----	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
7122B: Colp-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7122C2: Colp-----	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 14.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements						Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
7131A: Alvin-----	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7131B: Alvin-----	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7131C: Alvin-----	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7131C2: Alvin-----	Good	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7131D2: Alvin-----	Fair	Fair	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
7338A: Hurst-----	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.
7338B: Hurst-----	Fair	Good	Good	Good	Fair	Poor	Very poor.	Good	Good	Very poor.
7401A: Okaw-----	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
7460A: Ginat-----	Fair	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
7462A: Sciotoville-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
7462B: Sciotoville-----	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7462C2: Sciotoville-----	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7462C3: Sciotoville-----	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7462D2: Sciotoville-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 14.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
7462D3: Sciotoville-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
7463A: Wheeling-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7463B: Wheeling-----	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7463C2: Wheeling-----	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
7463D3: Wheeling-----	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
7711A: Hatfield-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
7711B: Hatfield-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
8070A: Beaucoup-----	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good.
8071A: Darwin-----	Poor	Poor	Fair	Poor	Poor	Good	Good	Poor	Poor	Good.
8072A: Sharon-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
8085A: Jacob-----	Very poor.	Poor	Poor	Fair	Very poor.	Fair	Good	Poor	Fair	Good.
8092B: Sarpy-----	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
8108A: Bonnie-----	Poor	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.

Table 14.—Wildlife Habitat-Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	for--
8109A: Raccoon-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	
8162A: Gorham-----	Good	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.	
8175B: Lamont-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.	
8178A: Ruark-----	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.	
8180A: Dupo-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.	
8184A: Roby-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.	
8184B: Roby-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.	
8284A: Tice-----	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.	
8288A: Petrolia-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	
8331A: Haymond-----	Good	Good	Fair	Good	Good	Poor	Poor	Good	Good	Poor.	
8333A: Wakeland-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.	
8334A: Birds-----	Good	Fair	Good	Good	Fair	Good	Good	Good	Good	Good.	
8382A: Belknap-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.	
8420A: Piopolis-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	
8422A: Cape-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	
8422A+: Cape-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.	

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
8426A: Karnak-----	Very poor.	Poor	Poor	Fair	Very poor.	Good	Good	Poor	Fair	Good.
8426A+: Karnak-----	Very poor.	Poor	Poor	Fair	Very poor.	Good	Good	Poor	Fair	Good.
8452A: Riley-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
8452B: Riley-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
8456B: Ware-----	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
8475B: Elsah-----	Fair	Fair	Fair	Good	Fair	Poor	Poor	Fair	Good	Poor.
8589B: Bowdre-----	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fair	Poor.
8590A: Cairo-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8597A: Armiesburg-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
8682B: Medway-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
MW. Miscellaneous water										
W. Water										

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
75C3: Drury-----	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
75D: Drury-----	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
79B: Menfro-----	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
79C: Menfro-----	Somewhat limited Shrink-swell Slope	0.50	Somewhat limited Shrink-swell Slope	0.50	Very limited Slope	1.00
		0.01		0.01	Shrink-swell	0.50
79C2: Menfro-----	Somewhat limited Shrink-swell Slope	0.50	Somewhat limited Shrink-swell Slope	0.50	Very limited Slope	1.00
		0.01		0.01	Shrink-swell	0.50
79C3: Menfro-----	Somewhat limited Shrink-swell Slope	0.50	Somewhat limited Shrink-swell Slope	0.50	Very limited Slope	1.00
		0.01		0.01	Shrink-swell	0.50
79D: Menfro-----	Somewhat limited Slope Shrink-swell	0.96	Somewhat limited Slope Shrink-swell	0.96	Very limited Slope	1.00
		0.50		0.50	Shrink-swell	0.50
79D2: Menfro-----	Somewhat limited Slope Shrink-swell	0.96	Somewhat limited Slope Shrink-swell	0.96	Very limited Slope	1.00
		0.50		0.50	Shrink-swell	0.50
79D3: Menfro-----	Somewhat limited Slope Shrink-swell	0.96	Somewhat limited Slope Shrink-swell	0.96	Very limited Slope	1.00
		0.50		0.50	Shrink-swell	0.50
79E: Menfro-----	Very limited Slope Shrink-swell	1.00	Very limited Slope Shrink-swell	1.00	Very limited Slope	1.00
		0.50		0.50	Shrink-swell	0.50
79E2: Menfro-----	Very limited Slope Shrink-swell	1.00	Very limited Slope Shrink-swell	1.00	Very limited Slope	1.00
		0.50		0.50	Shrink-swell	0.50

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79E3: Menfro-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
79F: Menfro-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
164B: Stoy-----	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.39
175A: Lamont-----	Not limited		Not limited		Not limited	
175B: Lamont-----	Not limited		Not limited		Not limited	
175C: Lamont-----	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
214B: Hosmer-----	Somewhat limited Shrink-swell	0.50	Very limited Depth to saturated zone Shrink-swell	0.99 0.50	Somewhat limited Shrink-swell	0.50
214C: Hosmer-----	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Depth to saturated zone Shrink-swell Slope	0.99 0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
214C2: Hosmer-----	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Depth to saturated zone Shrink-swell Slope	0.99 0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
214C3: Hosmer-----	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Depth to saturated zone Shrink-swell Slope	0.99 0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
214D2: Hosmer-----	Somewhat limited Slope Shrink-swell	0.96 0.50	Very limited Depth to saturated zone Slope Shrink-swell	0.99 0.96 0.50	Very limited Slope Shrink-swell	1.00 0.50

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214D3: Hosmer-----	Somewhat limited Slope Shrink-swell	0.96 0.50	Very limited Depth to saturated zone Slope Shrink-swell	0.99 0.96 0.50	Very limited Slope Shrink-swell	1.00 0.50
216D: Stookey-----	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
216D2: Stookey-----	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
216E: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216E2: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216E3: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216F: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216G: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
471F: Clarksville-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
471G: Clarksville-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
477B: Winfield-----	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Somewhat limited Shrink-swell	0.50
477C: Winfield-----	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Depth to saturated zone Shrink-swell Slope	0.99 0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
477C2: Winfield-----	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Depth to saturated zone Shrink-swell Slope	0.99 0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
477C3: Winfield-----	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Depth to saturated zone Shrink-swell Slope	0.99 0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
477D2: Winfield-----	Somewhat limited Slope Shrink-swell	0.96 0.50	Somewhat limited Depth to saturated zone Slope Shrink-swell	0.99 0.96 0.50	Very limited Slope Shrink-swell	1.00 0.50
477D3: Winfield-----	Somewhat limited Slope Shrink-swell	0.96 0.50	Somewhat limited Depth to saturated zone Slope Shrink-swell	0.99 0.96 0.50	Very limited Slope Shrink-swell	1.00 0.50
477E3: Winfield-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Slope Shrink-swell	1.00 0.50
477F: Winfield-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Slope Shrink-swell	1.00 0.50
717F: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Clarksville-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
717G: Clarksville-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
801B: Orthents-----	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802D: Orthents-----	Somewhat limited Shrink-swell Slope	0.50 0.37	Somewhat limited Shrink-swell Slope	0.50 0.37	Very limited Slope Shrink-swell	1.00 0.50
832F: Menfro-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Clarksville-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
832G: Clarksville-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Menfro-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
833F: Menfro-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Goss-----	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.03	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.03	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.03
833G: Goss-----	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.03	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.03	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.03
Menfro-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
864: Pits, quarries-----	Not rated		Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated		Not rated	
1426A: Karnak-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1843A: Bonnie-----	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
Petrolia-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50
1845A: Darwin-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00
Jacob-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00
1846A: Karnak-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00
Cape-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00
3070L: Beaucoup-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50
3071A: Darwin-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3071L: Darwin-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00
3092BL: Sarpy-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding Slope	1.00 0.12
3108A: Bonnie-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00
3162L: Gorham-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50
3180L: Dupo-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
3284L: Tice-----	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
3288L: Petrolia-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50
3331A: Haymond-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
3331L: Haymond-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3333A: Wakeland-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
3333L: Wakeland-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
3334A: Birds-----	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3334L: Birds-----	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3382A: Belknap-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
3420A: Piopolis-----	Very limited Flooding Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50
3422A: Cape-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00
3422A+: Cape-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3426L: Karnak-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00
3449L: Armiesburg-----	Very limited Flooding Shrink-swell	 1.00 0.50	Very limited Flooding Shrink-swell	 1.00 0.50	Very limited Flooding Shrink-swell	 1.00 0.50
Sarpy-----	Very limited Flooding	 1.00	Very limited Flooding	 1.00	Very limited Flooding	 1.00
3452L: Riley-----	Very limited Flooding Depth to saturated zone	 1.00 0.99	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 0.99
3456B: Ware-----	Very limited Flooding	 1.00	Very limited Flooding	 1.00	Very limited Flooding	 1.00
3456BL: Ware-----	Very limited Flooding	 1.00	Very limited Flooding	 1.00	Very limited Flooding	 1.00
3590L: Cairo-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00
3597L: Armiesburg-----	Very limited Flooding Shrink-swell	 1.00 0.50	Very limited Flooding Shrink-swell	 1.00 0.50	Very limited Flooding Shrink-swell	 1.00 0.50
3682BL: Medway-----	Very limited Flooding Depth to saturated zone	 1.00 0.07	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 0.07
7084A: Okaw-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7122B: Colp-----	Very limited Flooding Shrink-swell	1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.95	Very limited Flooding Shrink-swell	1.00 1.00
7122C2: Colp-----	Very limited Flooding Shrink-swell	1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.95	Very limited Flooding Shrink-swell Slope	1.00 1.00 0.88
7131A: Alvin-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
7131B: Alvin-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
7131C: Alvin-----	Very limited Flooding Slope	1.00 0.01	Very limited Flooding Slope	1.00 0.01	Very limited Flooding Slope	1.00 1.00
7131C2: Alvin-----	Very limited Flooding Slope	1.00 0.01	Very limited Flooding Slope	1.00 0.01	Very limited Flooding Slope	1.00 1.00
7131D2: Alvin-----	Very limited Flooding Slope	1.00 0.96	Very limited Flooding Slope	1.00 0.96	Very limited Slope Flooding	1.00 1.00
7338A: Hurst-----	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.44	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.44
7338B: Hurst-----	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.44	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.44
7401A: Okaw-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7460A: Ginat-----	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
7462A: Sciotoville-----	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07
7462B: Sciotoville-----	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07
7462C2: Sciotoville-----	Very limited Flooding Depth to saturated zone Slope	1.00 0.07 0.01	Very limited Flooding Depth to saturated zone Slope	1.00 1.00 0.01	Very limited Flooding Slope Depth to saturated zone	1.00 1.00 0.07
7462C3: Sciotoville-----	Very limited Flooding Depth to saturated zone Slope	1.00 0.07 0.01	Very limited Flooding Depth to saturated zone Slope	1.00 1.00 0.01	Very limited Flooding Slope Depth to saturated zone	1.00 1.00 0.07
7462D2: Sciotoville-----	Very limited Flooding Slope Depth to saturated zone	1.00 0.96 0.07	Very limited Flooding Depth to saturated zone Slope	1.00 1.00 0.96	Very limited Slope Flooding Depth to saturated zone	1.00 1.00 0.07
7462D3: Sciotoville-----	Very limited Flooding Slope Depth to saturated zone	1.00 0.96 0.07	Very limited Flooding Depth to saturated zone Slope	1.00 1.00 0.96	Very limited Slope Flooding Depth to saturated zone	1.00 1.00 0.07
7463A: Wheeling-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
7463B: Wheeling-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
7463C2: Wheeling-----	Very limited Flooding Slope	1.00 0.01	Very limited Flooding Slope	1.00 0.01	Very limited Flooding Slope	1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7463D3: Wheeling-----	Very limited Flooding Slope	1.00 0.96	Very limited Flooding Slope	1.00 0.96	Very limited Slope Flooding	1.00 1.00
7711A: Hatfield-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00
7711B: Hatfield-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00
8070A: Beaucoup-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50
8071A: Darwin-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00
8072A: Sharon-----	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.61	Very limited Flooding	1.00
8085A: Jacob-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00
8092B: Sarpy-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding Slope	1.00 0.12
8108A: Bonnie-----	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8109A: Raccoon-----	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8162A: Gorham-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50
8175B: Lamont-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding Slope	1.00 0.12
8178A: Ruark-----	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8180A: Dupo-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
8184A: Roby-----	Very limited Flooding Depth to saturated zone	1.00 0.39	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.39
8184B: Roby-----	Very limited Flooding Depth to saturated zone	1.00 0.39	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.39
8284A: Tice-----	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
8288A: Petroli-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8331A: Haymond-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
8333A: Wakeland-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
8334A: Birds-----	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
8382A: Belknap-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
8420A: Piopolis-----	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8422A: Cape-----	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
8422A+: Cape-----	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
8426A: Karnak-----	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
8426A+: Karnak-----	Very limited Ponding	1.00	Very limited Ponding	1.00	Very limited Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part I—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8452A: Riley-----	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50
8452B: Riley-----	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50
8456B: Ware-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
8475B: Elsah-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
8589B: Bowdre-----	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.81	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 0.81
8590A: Cairo-----	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00
8597A: Armiesburg-----	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50
8682B: Medway-----	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07
MW: Miscellaneous water-	Not rated		Not rated		Not rated	
W. Water-----	Not rated		Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Very limited Frost action Low strength Slope	1.00 1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
75C3: Drury-----	Very limited Frost action Low strength Slope	1.00 1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
75D: Drury-----	Very limited Frost action Low strength Slope	1.00 1.00 0.96	Somewhat limited Slope Cutbanks cave	0.96 0.10	Somewhat limited Slope	0.96
79B: Menfro-----	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
79C: Menfro-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
79C2: Menfro-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
79C3: Menfro=-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
79D: Menfro-----	Very limited Frost action Low strength Slope Shrink-swell	1.00 1.00 0.96 0.50	Somewhat limited Slope Cutbanks cave	0.96 0.10	Somewhat limited Slope	0.96

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79D2: Menfro-----	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.10		
	Slope	0.96				
	Shrink-swell	0.50				
79D3: Menfro-----	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.10		
	Slope	0.96				
	Shrink-swell	0.50				
79E: Menfro-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
79E2: Menfro-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
79E3: Menfro-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
79F: Menfro-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
164B: Stoy-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.19
	Low strength	1.00	saturated zone		saturated zone	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Depth to	0.19				
	saturated zone					
175A: Lamont-----	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
175B: Lamont-----	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
175C: Lamont-----	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
214B: Hosmer-----	Very limited Frost action Low strength Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	0.99 0.10	Somewhat limited Depth to fragipan	0.64
214C: Hosmer-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 0.78 0.50 0.01	Very limited Depth to saturated zone Cutbanks cave Slope	0.99 0.10 0.01	Somewhat limited Depth to fragipan Slope	0.64 0.01
214C2: Hosmer-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 0.78 0.50 0.01	Very limited Depth to saturated zone Cutbanks cave Slope	0.99 0.10 0.01	Somewhat limited Depth to fragipan Slope	0.86 0.01
214C3: Hosmer-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 0.78 0.50 0.01	Very limited Depth to saturated zone Cutbanks cave Slope	0.99 0.10 0.01	Somewhat limited Depth to fragipan Slope	0.86 0.01
214D2: Hosmer-----	Very limited Frost action Slope Low strength Shrink-swell	1.00 0.96 0.78 0.50	Very limited Depth to saturated zone Slope Cutbanks cave	0.99 0.96 0.10	Somewhat limited Slope Depth to fragipan	0.96 0.86
214D3: Hosmer-----	Very limited Frost action Slope Low strength Shrink-swell	1.00 0.96 0.78 0.50	Very limited Depth to saturated zone Slope Cutbanks cave	0.99 0.96 0.10	Somewhat limited Slope Depth to fragipan	0.96 0.95
216D: Stookey-----	Very limited Frost action Low strength Slope	1.00 1.00 0.96	Somewhat limited Slope Cutbanks cave	0.96 0.10	Somewhat limited Slope	0.96
216D2: Stookey-----	Very limited Frost action Low strength Slope	1.00 1.00 0.96	Somewhat limited Slope Cutbanks cave	0.96 0.10	Somewhat limited Slope	0.96

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
216E: Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
216E2: Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
216E3: Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
216F: Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
216G: Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
471F: Clarksville-----	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.01	Very limited Slope Large stones content	1.00 0.20
471G: Clarksville-----	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.01	Very limited Slope Large stones content	1.00 0.20
477B: Winfield-----	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.99 0.10	Not limited	
477C: Winfield-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Depth to saturated zone Cutbanks cave Slope	0.99 0.10 0.01	Somewhat limited Slope	0.01
477C2: Winfield-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Depth to saturated zone Cutbanks cave Slope	0.99 0.10 0.01	Somewhat limited Slope	0.01

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
477C3: Winfield-----	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Depth to saturated zone Cutbanks cave Slope	0.99 0.10 0.01	Somewhat limited Slope	0.01
477D2: Winfield-----	Very limited Frost action Low strength Slope Shrink-swell	1.00 1.00 0.96 0.50	Somewhat limited Depth to saturated zone Slope Cutbanks cave	0.99 0.96 0.96 0.10	Somewhat limited Slope	0.96
477D3: Winfield-----	Very limited Frost action Low strength Slope Shrink-swell	1.00 1.00 0.96 0.50	Somewhat limited Depth to saturated zone Slope Cutbanks cave	0.99 0.96 0.96 0.10	Somewhat limited Slope	0.96
477E3: Winfield-----	Very limited Slope Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to saturated zone Cutbanks cave	1.00 0.99 0.10	Very limited Slope	1.00
477F: Winfield-----	Very limited Slope Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to saturated zone Cutbanks cave	1.00 0.99 0.10	Very limited Slope	1.00
717F: Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Clarksville-----	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.01	Very limited Slope Large stones content	1.00 0.20
717G: Clarksville-----	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.01	Very limited Slope Large stones content	1.00 0.20
Stookey-----	Very limited Slope Frost action Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
801B: Orthents-----	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
802D: Orthents-----	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.37	Somewhat limited Dense layer Slope Cutbanks cave	0.50 0.37 0.10	Somewhat limited Slope	0.37
832F: Menfro-----	Very limited Slope Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Clarksville-----	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.01	Very limited Slope Large stones content	1.00 0.20
832G: Clarksville-----	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.01	Very limited Slope Large stones content	1.00 0.20
Menfro-----	Very limited Slope Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
833F: Menfro-----	Very limited Slope Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
833F: Goss-----	Very limited Slope Shrink-swell Frost action Large stones content	1.00 0.50 0.50 0.03	Very limited Slope Cutbanks cave Too clayey Large stones content	1.00 1.00 0.95 0.03	Very limited Slope Droughty Gravel content Large stones content	1.00 0.49 0.04 0.01
833G: Goss-----	Very limited Slope Shrink-swell Frost action Large stones content	1.00 0.50 0.50 0.03	Very limited Slope Cutbanks cave Too clayey Large stones content	1.00 1.00 0.95 0.03	Very limited Slope Droughty Gravel content Large stones content	1.00 0.49 0.04 0.01
Menfro-----	Very limited Slope Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
864: Pits, quarries-----	Not rated		Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated		Not rated	
1426A: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Too clayey	0.95	saturated zone	
	Flooding	1.00	Flooding	0.80	Too clayey	1.00
	Low strength	1.00	Cutbanks cave	0.10		
1843A: Bonnie-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Flooding	0.80	saturated zone	
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
Petrolia-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Flooding	0.80	saturated zone	
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
1845A: Darwin-----	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to	1.00	Flooding	1.00
	Depth to	1.00	saturated zone		Depth to	1.00
	saturated zone		Flooding	0.80	saturated zone	
	Flooding	1.00	Too clayey	0.28	Too clayey	1.00
	Low strength	1.00	Cutbanks cave	0.10		
Jacob-----	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Too clayey	1.00
	Ponding	1.00	Depth to	1.00	Ponding	1.00
	Depth to	1.00	saturated zone		Flooding	1.00
	saturated zone		Too clayey	1.00	Depth to	1.00
	Flooding	1.00	Flooding	0.80	saturated zone	
	Low strength	1.00	Cutbanks cave	0.10		
1846A: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Too clayey	0.95	saturated zone	
	Flooding	1.00	Flooding	0.80	Too clayey	1.00
	Low strength	1.00	Cutbanks cave	0.10		

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1846A: Cape-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Flooding	0.80	saturated zone	
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00	Too clayey	0.02		
3070L: Beaucoup-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Flooding	0.80	saturated zone	
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
3071A: Darwin-----	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to	1.00	Flooding	1.00
	Depth to	1.00	saturated zone		Depth to	1.00
	saturated zone		Flooding	0.80	saturated zone	
	Flooding	1.00	Too clayey	0.28	Too clayey	1.00
	Low strength	1.00	Cutbanks cave	0.10		
3071L: Darwin-----	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to	1.00	Flooding	1.00
	Depth to	1.00	saturated zone		Depth to	1.00
	saturated zone		Flooding	0.80	saturated zone	
	Flooding	1.00	Too clayey	0.28	Too clayey	1.00
	Low strength	1.00	Cutbanks cave	0.10		
3092BL: Sarpy-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
			Flooding	0.80	Droughty	0.69
3108A: Bonnie-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Ponding	1.00	saturated zone	
	Flooding	1.00	Flooding	0.80	Ponding	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
3162L: Gorham-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Frost action	1.00	Cutbanks cave	1.00	saturated zone	
	Flooding	1.00	Flooding	0.80		
	Low strength	1.00				

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3180L: Dupo-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.95	Very limited Depth to saturated zone Flooding Too clayey Cutbanks cave	1.00 0.80 0.24 0.10	Very limited Flooding Depth to saturated zone	1.00 0.95
3284L: Tice-----	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.94 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	1.00 0.94
3288L: Petrolia-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.80 0.10	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3331A: Haymond-----	Very limited Frost action Flooding	1.00 1.00	Somewhat limited Flooding Cutbanks cave	0.80 0.10	Very limited Flooding	1.00
3331L: Haymond-----	Very limited Frost action Flooding	1.00 1.00	Somewhat limited Flooding Cutbanks cave	0.80 0.10	Very limited Flooding	1.00
3333A: Wakeland-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	1.00 0.94
3333L: Wakeland-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	1.00 0.94
3334A: Birds-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.80 0.10	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00

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Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3334L: Birds-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	 1.00 1.00 0.80 0.10	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
3382A: Belknap-----	Very limited Frost action Flooding Depth to saturated zone	 1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 0.94
3420A: Piopolis-----	Very limited Depth to saturated zone Frost action Flooding Low strength Ponding	 1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Flooding Cutbanks cave	 1.00 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00
3422A: Cape-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave Too clayey	 1.00 1.00 0.80 0.10 0.02	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
3422A+: Cape-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave Too clayey	 1.00 1.00 0.80 0.10 0.02	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
3426L: Karnak-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Flooding Cutbanks cave	 1.00 1.00 0.95 0.80 0.10	Very limited Ponding Flooding Depth to saturated zone Too clayey	 1.00 1.00 1.00
3449L: Armiesburg-----	Very limited Frost action Flooding Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Somewhat limited Flooding Cutbanks cave	 0.80 0.10	Very limited Flooding	 1.00
Sarpy-----	Very limited Flooding	 1.00	Very limited Cutbanks cave Flooding	 1.00 0.80	Very limited Flooding Droughty	 1.00 0.69

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Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3452L: Riley-----	Very limited Frost action Flooding Depth to saturated zone	 1.00 1.00 0.78	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 0.78
3456B: Ware-----	Very limited Flooding Frost action	 1.00 0.50	Somewhat limited Flooding Cutbanks cave	 0.80 0.10	Very limited Flooding	 1.00
3456BL: Ware-----	Very limited Flooding Frost action	 1.00 0.50	Somewhat limited Flooding Cutbanks cave	 0.80 0.10	Very limited Flooding	 1.00
3590L: Cairo-----	Very limited Ponding Depth to saturated zone Flooding Low strength Shrink-swell	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Too clayey Cutbanks cave	 1.00 1.00 0.80 0.32 0.10	Very limited Ponding Flooding Depth to saturated zone Too clayey Droughty	 1.00 1.00 1.00 1.00 0.05
3597L: Armiesburg-----	Very limited Frost action Flooding Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Somewhat limited Flooding Cutbanks cave	 0.80 0.10	Very limited Flooding	 1.00
3682BL: Medway-----	Very limited Frost action Flooding Low strength Depth to saturated zone	 1.00 1.00 1.00 0.03	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 0.03
7084A: Okaw-----	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.32 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
7122B: Colp-----	Very limited Frost action Low strength Shrink-swell Flooding	 1.00 1.00 1.00 0.40	Somewhat limited Depth to saturated zone Cutbanks cave	 0.95 0.10	Not limited	

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7122C2: Colp-----	Very limited Frost action Low strength Shrink-swell Flooding	1.00 1.00 1.00 0.40	Somewhat limited Depth to saturated zone Cutbanks cave Too clayey	0.95 0.10 0.02	Not limited	
7131A: Alvin-----	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave	1.00	Not limited	
7131B: Alvin-----	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave	1.00	Not limited	
7131C: Alvin-----	Somewhat limited Frost action Flooding Slope	0.50 0.40 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
7131C2: Alvin-----	Somewhat limited Frost action Flooding Slope	0.50 0.40 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
7131D2: Alvin-----	Somewhat limited Slope Frost action Flooding	0.96 0.50 0.40	Very limited Cutbanks cave Slope	1.00 0.96	Somewhat limited Slope	0.96
7338A: Hurst-----	Very limited Low strength Shrink-swell Frost action Flooding Depth to saturated zone	1.00 1.00 0.50 0.40 0.22	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.22
7338B: Hurst-----	Very limited Low strength Shrink-swell Frost action Flooding Depth to saturated zone	1.00 1.00 0.50 0.40 0.22	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.22
7401A: Okaw-----	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	1.00 1.00 0.32 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7460A: Ginat-----	Very limited Ponding Depth to saturated zone Frost action Low strength Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
7462A: Sciotoville-----	Very limited Frost action Low strength Flooding Depth to saturated zone	1.00 0.78 0.40 0.03	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.03
7462B: Sciotoville-----	Very limited Frost action Low strength Flooding Depth to saturated zone	1.00 0.78 0.40 0.03	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.03
7462C2: Sciotoville-----	Very limited Frost action Low strength Flooding Depth to saturated zone Slope	1.00 0.78 0.40 0.03 0.01	Very limited Depth to saturated zone Cutbanks cave Slope	1.00 0.10 0.01	Somewhat limited Depth to saturated zone Slope	0.03 0.01
7462C3: Sciotoville-----	Very limited Frost action Low strength Flooding Depth to saturated zone Slope	1.00 0.78 0.40 0.03 0.01	Very limited Depth to saturated zone Cutbanks cave Slope	1.00 0.10 0.01	Somewhat limited Depth to saturated zone Slope	0.03 0.01
7462D2: Sciotoville-----	Very limited Frost action Slope Low strength Flooding Depth to saturated zone	1.00 0.96 0.78 0.40 0.03	Very limited Depth to saturated zone Slope Cutbanks cave	1.00 0.96 0.10	Somewhat limited Slope Depth to saturated zone	0.96 0.03
7462D3: Sciotoville-----	Very limited Frost action Slope Low strength Flooding Depth to saturated zone	1.00 0.96 0.78 0.40 0.03	Very limited Depth to saturated zone Slope Cutbanks cave	1.00 0.96 0.10	Somewhat limited Slope Depth to saturated zone	0.96 0.03

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7463A: Wheeling-----	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave	1.00	Not limited	
7463B: Wheeling-----	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave	1.00	Not limited	
7463C2: Wheeling-----	Somewhat limited Frost action Flooding Slope	0.50 0.40 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
7463D3: Wheeling-----	Somewhat limited Slope Frost action Flooding	0.96 0.50 0.40	Very limited Cutbanks cave Slope	1.00 0.96	Somewhat limited Slope	0.96
7711A: Hatfield-----	Very limited Depth to saturated zone Frost action Low strength Flooding	1.00 1.00 0.78 0.40	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
7711B: Hatfield-----	Very limited Depth to saturated zone Frost action Low strength Flooding	1.00 1.00 0.78 0.40	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
8070A: Beaucoup-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.60 0.10	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8071A: Darwin-----	Very limited Shrink-swell Ponding Depth to saturated zone Flooding Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Too clayey Cutbanks cave	1.00 1.00 0.60 0.28 0.10	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 1.00 0.60
8072A: Sharon-----	Very limited Frost action Flooding	1.00 1.00	Somewhat limited Depth to saturated zone Flooding Cutbanks cave	0.61 0.60 0.10	Somewhat limited Flooding	0.60

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8085A: Jacob-----	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Too clayey	1.00
	Ponding	1.00	Depth to	1.00	Ponding	1.00
	Depth to	1.00	saturated zone		Depth to	1.00
	saturated zone		Too clayey	1.00	saturated zone	
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00	Cutbanks cave	0.10		
8092B: Sarpy-----	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Cutbanks cave	1.00	Droughty	0.69
			Flooding	0.60	Flooding	0.60
8108A: Bonnie-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
8109A: Raccoon-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
8162A: Gorham-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
	Flooding	1.00	Flooding	0.60		
	Low strength	1.00				
8175B: Lamont-----	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
	Frost action	0.50	Flooding	0.60		
8178A: Ruark-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
8180A: Dupo-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.95
	Flooding	1.00	saturated zone		saturated zone	
	Depth to	0.95	Flooding	0.60	Flooding	0.60
	saturated zone		Too clayey	0.24		
			Cutbanks cave	0.10		

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8184A: Roby-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.19	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.19
8184B: Roby-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.19	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.19
8284A: Tice-----	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.94 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.60 0.10	Somewhat limited Depth to saturated zone Flooding	0.94 0.60
8288A: Petrolia-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.60 0.10	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8331A: Haymond-----	Very limited Frost action Flooding	1.00 1.00	Somewhat limited Flooding Cutbanks cave	0.60 0.10	Somewhat limited Flooding	0.60
8333A: Wakeland-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.60 0.10	Somewhat limited Depth to saturated zone Flooding	0.94 0.60
8334A: Birds-----	Very limited Ponding Depth to saturated zone Frost action Flooding Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.60 0.10	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8382A: Belknap-----	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.60 0.10	Somewhat limited Depth to saturated zone Flooding	0.94 0.60

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8420A: Piopolis-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
8422A: Cape-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00	Too clayey	0.02		
8422A+: Cape-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00	Too clayey	0.02		
8426A: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Too clayey	0.95	Too clayey	1.00
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00	Cutbanks cave	0.10		
8426A+: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Too clayey	0.95	Flooding	0.60
	Flooding	1.00	Flooding	0.60		
	Low strength	1.00	Cutbanks cave	0.10		
8452A: Riley-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.78
	Flooding	1.00	saturated zone		saturated zone	
	Depth to	0.78	Cutbanks cave	1.00	Flooding	0.60
	saturated zone		Flooding	0.60	Droughty	0.48
	Shrink-swell	0.50				
8452B: Riley-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.78
	Flooding	1.00	saturated zone		saturated zone	
	Depth to	0.78	Cutbanks cave	1.00	Flooding	0.60
	saturated zone		Flooding	0.60	Droughty	0.48
	Shrink-swell	0.50				

Soil Survey of Alexander County, Illinois

Table 15.—Building Site Development, Part II—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8456B: Ware-----	Very limited Flooding Frost action	1.00 0.50	Somewhat limited Flooding Cutbanks cave	0.60 0.10	Somewhat limited Flooding	0.60
8475B: Elsah-----	Very limited Flooding Frost action	1.00 0.50	Very limited Cutbanks cave Flooding	1.00 0.60	Somewhat limited Flooding	0.60
8589B: Bowdre-----	Very limited Flooding Low strength Shrink-swell Depth to saturated zone	1.00 1.00 1.00 0.48	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.60 0.10	Very limited Too clayey Flooding Depth to saturated zone Droughty	1.00 0.60 0.48 0.43
8590A: Cairo-----	Very limited Ponding Depth to saturated zone Flooding Low strength Shrink-swell	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Too clayey Cutbanks cave	1.00 1.00 0.60 0.32 0.10	Very limited Ponding Depth to saturated zone Too clayey Flooding Droughty	1.00 1.00 1.00 0.60 0.05
8597A: Armiesburg-----	Very limited Frost action Flooding Low strength Shrink-swell	1.00 1.00 1.00 0.50	Somewhat limited Flooding Cutbanks cave	0.60 0.10	Somewhat limited Flooding	0.60
8682B: Medway-----	Very limited Frost action Flooding Low strength Depth to saturated zone	1.00 1.00 1.00 0.03	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	1.00 0.03
MW: Miscellaneous water-	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
75C3: Drury-----	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
75D: Drury-----	Somewhat limited Slope Slow water movement	0.96 0.46	Very limited Slope Seepage	1.00 0.53
79B: Menfro-----	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage Slope	0.53 0.32
79C: Menfro-----	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
79C2: Menfro-----	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
79C3: Menfro-----	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
79D: Menfro-----	Somewhat limited Slope Slow water movement	0.96 0.46	Very limited Slope Seepage	1.00 0.53
79D2: Menfro-----	Somewhat limited Slope Slow water movement	0.96 0.46	Very limited Slope Seepage	1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
79D3: Menfro-----	Somewhat limited Slope Slow water movement	0.96 0.46	Very limited Slope Seepage	1.00 0.53
79E: Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
79E2: Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
79E3: Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
79F: Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
164B: Stoy-----	Very limited Slow water movement Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone Seepage Slope	0.75 0.53 0.32
175A: Lamont-----	Very limited Seepage, bottom layer	1.00	Very limited Seepage	1.00
175B: Lamont-----	Very limited Seepage, bottom layer	1.00	Very limited Seepage Slope	1.00 0.32
175C: Lamont-----	Very limited Seepage, bottom layer Slope	1.00 0.01	Very limited Seepage Slope	1.00 1.00
214B: Hosmer-----	Very limited Depth to fragipan Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Depth to fragipan Seepage Slope Depth to saturated zone	1.00 0.53 0.32 0.17

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
214C: Hosmer-----	Very limited Depth to fragipan 1.00 Depth to saturated zone 1.00 Slow water movement 0.46 Slope 0.01		Very limited Depth to fragipan 1.00 Slope 1.00 Seepage 0.53 Depth to saturated zone 0.17	
214C2: Hosmer-----	Very limited Depth to fragipan 1.00 Depth to saturated zone 1.00 Slow water movement 0.46 Slope 0.01		Very limited Depth to fragipan 1.00 Slope 1.00 Seepage 0.53 Depth to saturated zone 0.17	
214C3: Hosmer-----	Very limited Depth to fragipan 1.00 Depth to saturated zone 1.00 Slope 0.01		Very limited Depth to fragipan 1.00 Slope 1.00 Seepage 0.53 Depth to saturated zone 0.17	
214D2: Hosmer-----	Very limited Depth to fragipan 1.00 Depth to saturated zone 1.00 Slope 0.96		Very limited Depth to fragipan 1.00 Slope 1.00 Seepage 0.53 Depth to saturated zone 0.17	
214D3: Hosmer-----	Very limited Depth to fragipan 1.00 Depth to saturated zone 1.00 Slope 0.96		Very limited Depth to fragipan 1.00 Slope 1.00 Seepage 0.53 Depth to saturated zone 0.17	
216D: Stookey-----	Somewhat limited Slope 0.96 Slow water movement 0.46		Very limited Slope 1.00 Seepage 0.53	
216D2: Stookey-----	Somewhat limited Slope 0.96 Slow water movement 0.46		Very limited Slope 1.00 Seepage 0.53	
216E: Stookey-----	Very limited Slope 1.00 Slow water movement 0.46		Very limited Slope 1.00 Seepage 0.53	

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
216E2: Stookey-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
216E3: Stookey-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
216F: Stookey-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
216G: Stookey-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
471F: Clarksville-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 1.00
471G: Clarksville-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 1.00
477B: Winfield-----	Very limited Depth to saturated zone Slow water movement	1.00 0.46	Very limited Depth to saturated zone Seepage Slope	1.00 0.53 0.32
477C: Winfield-----	Very limited Depth to saturated zone Slow water movement Slope	1.00 0.46 0.01	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.53
477C2: Winfield-----	Very limited Depth to saturated zone Slow water movement Slope	1.00 0.46 0.01	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
477C3: Winfield-----	Very limited Depth to saturated zone Slow water movement Slope	1.00 0.46 0.01	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.53
477D2: Winfield-----	Very limited Depth to saturated zone Slope Slow water movement	1.00 0.96 0.46	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.53
477D3: Winfield-----	Very limited Depth to saturated zone Slope Slow water movement	1.00 0.96 0.46	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.53
477E3: Winfield-----	Very limited Depth to saturated zone Slope Slow water movement	1.00 1.00 0.46	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.53
477F: Winfield-----	Very limited Depth to saturated zone Slope Slow water movement	1.00 1.00 0.46	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.53
717F: Stookey-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Clarksville-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 1.00
717G: Clarksville-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 1.00
Stookey-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
801B: Orthents-----	Somewhat limited Slow water movement	0.72	Somewhat limited Seepage Slope	0.28 0.08
802D: Orthents-----	Very limited Slow water movement Slope	1.00 0.37	Very limited Slope	1.00
832F: Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Clarksville-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 1.00
832G: Clarksville-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 1.00
Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
833F: Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Goss-----	Very limited Slope Slow water movement Large stones content	1.00 0.46 0.03	Very limited Slope Seepage Large stones content	1.00 1.00 0.40
833G: Goss-----	Very limited Slope Slow water movement Large stones content	1.00 0.46 0.03	Very limited Slope Seepage Large stones content	1.00 1.00 0.40
Menfro-----	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
864: Pits, quarries-----	Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated	
1426A: Karnak-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
1843A: Bonnie-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
Petrolia-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
1845A: Darwin-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
Jacob-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
1846A: Karnak-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1846A: Cape-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
3070L: Beaucoup-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	 1.00 1.00 1.00 0.46	Very limited Ponding Flooding Depth to saturated zone Seepage	 1.00 1.00 1.00 0.53
3071A: Darwin-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
3071L: Darwin-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00
3092BL: Sarpy-----	Very limited Flooding Filtering capacity Seepage, bottom layer	 1.00 1.00 1.00	Very limited Flooding Seepage Slope	 1.00 1.00 0.68
3108A: Bonnie-----	Very limited Flooding Depth to saturated zone Slow water movement Ponding	 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding	 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3162L: Gorham-----	Very limited Flooding Ponding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Seepage Depth to saturated zone	1.00 1.00 1.00 1.00
3180L: Dupo-----	Very limited Flooding Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
3284L: Tice-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
3288L: Petrolia-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3331A: Haymond-----	Very limited Flooding Slow water movement	1.00 0.46	Very limited Flooding Seepage	1.00 0.53
3331L: Haymond-----	Very limited Flooding Slow water movement	1.00 0.46	Very limited Flooding Seepage	1.00 0.53
3333A: Wakeland-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3333L: Wakeland-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
3334A: Birds-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3334L: Birds-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3382A: Belknap-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.72	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.28
3420A: Piopolis-----	Very limited Flooding Slow water movement Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00
3422A: Cape-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3422A+: Cape-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Seepage	1.00 1.00 1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3426L: Karnak-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
3449L: Armiesburg-----	Very limited Flooding Slow water movement	1.00 0.46	Very limited Flooding Seepage	1.00 0.53
Sarpy-----	Very limited Flooding Filtering capacity Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage	1.00 1.00
3452L: Riley-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.46	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
3456B: Ware-----	Very limited Flooding Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Slope	1.00 1.00 0.32
3456BL: Ware-----	Very limited Flooding Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Slope	1.00 1.00 0.32
3590L: Cairo-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Seepage Depth to saturated zone	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3597L: Armiesburg-----	Very limited Flooding Slow water movement	1.00 0.46	Very limited Flooding Seepage	1.00 0.53
3682BL: Medway-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage Slope	1.00 1.00 1.00 0.32
7084A: Okaw-----	Very limited Slow water movement Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.40
7122B: Colp-----	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding Slope	1.00 0.40 0.32
7122C2: Colp-----	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Slope Flooding	1.00 1.00 0.40
7131A: Alvin-----	Very limited Seepage, bottom layer Flooding	1.00 0.40	Very limited Seepage Flooding	1.00 0.40
7131B: Alvin-----	Very limited Seepage, bottom layer Flooding	1.00 0.40	Very limited Seepage Flooding Slope	1.00 0.40 0.32
7131C: Alvin-----	Very limited Seepage, bottom layer Flooding Slope	1.00 0.40 0.01	Very limited Seepage Slope Flooding	1.00 1.00 0.40

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
7131C2: Alvin-----	Very limited Seepage, bottom layer Flooding Slope	1.00 0.40 0.01	Very limited Seepage Slope Flooding	1.00 1.00 0.40
7131D2: Alvin-----	Very limited Seepage, bottom layer Slope Flooding	1.00 0.96 0.40	Very limited Slope Seepage Flooding	1.00 1.00 0.40
7338A: Hurst-----	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40
7338B: Hurst-----	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding Slope	1.00 0.40 0.32
7401A: Okaw-----	Very limited Slow water movement Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.40
7460A: Ginat-----	Very limited Slow water movement Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Seepage Flooding	1.00 1.00 0.53 0.40
7462A: Sciotoville-----	Very limited Depth to saturated zone Seepage, bottom layer Slow water movement Flooding	1.00 1.00 1.00 0.40	Very limited Seepage Depth to saturated zone Flooding	1.00 0.44 0.40

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
7462B: Sciotoville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	0.44
	Slow water movement	1.00	Flooding	0.40
	Flooding	0.40	Slope	0.32
7462C2: Sciotoville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	1.00
	Slow water movement	1.00	Depth to saturated zone	0.44
	Flooding	0.40	Flooding	0.40
	Slope	0.01		
7462C3: Sciotoville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	1.00
	Slow water movement	1.00	Depth to saturated zone	0.44
	Flooding	0.40	Flooding	0.40
	Slope	0.01		
7462D2: Sciotoville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	0.44
	Slope	0.96	Flooding	0.40
	Flooding	0.40		
7462D3: Sciotoville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	0.44
	Slope	0.96	Flooding	0.40
	Flooding	0.40		
7463A: Wheeling-----	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
	Slow water movement	0.46	Flooding	0.40
	Flooding	0.40		

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
7463B: Wheeling-----	Very limited Seepage, bottom layer Slow water movement Flooding	1.00 0.46 0.40	Very limited Seepage Flooding Slope	1.00 0.40 0.32
7463C2: Wheeling-----	Very limited Seepage, bottom layer Slow water movement Flooding Slope	1.00 0.46 0.40 0.01	Very limited Seepage Slope Flooding	1.00 1.00 0.40
7463D3: Wheeling-----	Very limited Seepage, bottom layer Slope Slow water movement Flooding	1.00 0.96 0.46 0.40	Very limited Slope Seepage Flooding	1.00 1.00 0.40
7711A: Hatfield-----	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 0.53 0.40
7711B: Hatfield-----	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding Slope	1.00 0.53 0.40 0.32
8070A: Beaucoup-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 0.46	Very limited Ponding Flooding Depth to saturated zone Seepage	1.00 1.00 1.00 0.53
8071A: Darwin-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8072A: Sharon-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 0.71 0.53
8085A: Jacob-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8092B: Sarpy-----	Very limited Flooding Filtering capacity Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage Slope	1.00 1.00 0.68
8108A: Bonnie-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8109A: Raccoon-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8162A: Gorham-----	Very limited Flooding Ponding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Seepage Depth to saturated zone	1.00 1.00 1.00 1.00
8175B: Lamont-----	Very limited Flooding Seepage, bottom layer	1.00 1.00	Very limited Flooding Seepage Slope	1.00 1.00 0.68

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8178A: Ruark-----	Very limited Flooding Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Seepage	1.00 1.00 1.00 0.53
8180A: Dupo-----	Very limited Flooding Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
8184A: Roby-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.46	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
8184B: Roby-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.46	Very limited Flooding Seepage Depth to saturated zone Slope	1.00 1.00 1.00 0.32
8284A: Tice-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
8288A: Petrolia-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8331A: Haymond-----	Very limited Flooding Slow water movement	1.00 0.46	Very limited Flooding Seepage	1.00 0.53

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8333A: Wakeland-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
8334A: Birds-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8382A: Belknap-----	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.72	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.28
8420A: Piopolis-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8422A: Cape-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8422A+: Cape-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Seepage	1.00 1.00 1.00 0.53
8426A: Karnak-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8426A+: Karnak-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
8452A: Riley-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
8452B: Riley-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone Slope	1.00 1.00 1.00 0.32
8456B: Ware-----	Very limited Flooding Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Slope	1.00 1.00 0.32
8475B: Elsah-----	Very limited Flooding Seepage, bottom layer Slow water movement	1.00 1.00 0.46	Very limited Flooding Seepage Slope	1.00 1.00 0.08
8589B: Bowdre-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone Seepage Slope	1.00 1.00 0.53 0.32
8590A: Cairo-----	Very limited Flooding Slow water movement Ponding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Seepage Depth to saturated zone	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.--Sanitary Facilities, Part I--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8597A: Armiesburg-----	Very limited Flooding Slow water movement	1.00 0.46	Very limited Flooding Seepage	1.00 0.53
8682B: Medway-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage Slope	1.00 1.00 1.00 0.32
MW: Miscellaneous water-	Not rated		Not rated	
W: Water-----	Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
75C3: Drury-----	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
75D: Drury-----	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96
79B: Menfro-----	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
79C: Menfro-----	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Too clayey Slope	0.50 0.01
79C2: Menfro-----	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Too clayey Slope	0.50 0.01
79C3: Menfro-----	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Too clayey Slope	0.50 0.01
79D: Menfro-----	Somewhat limited Slope Too clayey	0.96 0.50	Somewhat limited Slope	0.96	Somewhat limited Slope Too clayey	0.96 0.50
79D2: Menfro-----	Somewhat limited Slope Too clayey	0.96 0.50	Somewhat limited Slope	0.96	Somewhat limited Slope Too clayey	0.96 0.50
79D3: Menfro-----	Somewhat limited Slope Too clayey	0.96 0.50	Somewhat limited Slope	0.96	Somewhat limited Slope Too clayey	0.96 0.50
79E: Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
79E2: Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79E3: Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
79F: Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
164B: Stoy-----	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.75	Somewhat limited Depth to saturated zone Too clayey	0.86 0.50
175A: Lamont-----	Very limited Seepage, bottom layer Too sandy	1.00 0.50	Very limited Seepage	1.00	Very limited Seepage Too sandy	1.00 0.50
175B: Lamont-----	Very limited Seepage, bottom layer Too sandy	1.00 0.50	Very limited Seepage	1.00	Very limited Seepage Too sandy	1.00 0.50
175C: Lamont-----	Very limited Seepage, bottom layer Too sandy Slope	1.00 0.50 0.01	Very limited Seepage Slope	1.00 0.01	Very limited Seepage Too sandy Slope	1.00 0.50 0.01
214B: Hosmer-----	Somewhat limited Depth to saturated zone Too clayey	0.84 0.50	Very limited Depth to cemented pan Depth to saturated zone	1.00 0.17	Very limited Depth to cemented pan Too clayey Depth to saturated zone	1.00 0.50 0.44
214C: Hosmer-----	Somewhat limited Depth to saturated zone Too clayey Slope	0.84 0.50 0.01	Very limited Depth to cemented pan Depth to saturated zone Slope	1.00 0.17 0.01	Very limited Depth to cemented pan Too clayey Depth to saturated zone Slope	1.00 0.50 0.44 0.01
214C2: Hosmer-----	Somewhat limited Depth to saturated zone Too clayey Slope	0.84 0.50 0.01	Very limited Depth to cemented pan Depth to saturated zone Slope	1.00 0.17 0.01	Very limited Depth to cemented pan Too clayey Depth to saturated zone Slope	1.00 0.50 0.44 0.01

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Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214C3: Hosmer-----	Somewhat limited Depth to saturated zone Too clayey Slope	0.84 0.50 0.01	Very limited Depth to cemented pan Depth to saturated zone Slope	1.00 0.17 0.01	Very limited Depth to cemented pan Too clayey Depth to saturated zone Slope	1.00 0.50 0.44 0.01
214D2: Hosmer-----	Somewhat limited Slope Depth to saturated zone Too clayey	0.96 0.84 0.50	Very limited Depth to cemented pan Slope Depth to saturated zone	1.00 0.96 0.17	Very limited Depth to cemented pan Slope Too clayey Depth to saturated zone	1.00 0.96 0.50 0.44
214D3: Hosmer-----	Somewhat limited Slope Depth to saturated zone Too clayey	0.96 0.84 0.50	Very limited Depth to cemented pan Slope Depth to saturated zone	1.00 0.96 0.17	Very limited Depth to cemented pan Slope Too clayey Depth to saturated zone	1.00 0.96 0.50 0.44
216D: Stookey-----	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96
216D2: Stookey-----	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96
216E: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216E2: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216E3: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216F: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
216G: Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
471F: Clarksville-----	Very limited Slope Too clayey	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 1.00 0.96

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
471G: Clarksville-----	Very limited Slope Too clayey	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 1.00 0.96
477B: Winfield-----	Very limited Depth to saturated zone Too clayey	1.00 0.50	Very limited Depth to saturated zone	1.00	Somewhat limited Too clayey Depth to saturated zone	0.50 0.24
477C: Winfield-----	Very limited Depth to saturated zone Too clayey Slope	1.00 0.50 0.01	Very limited Depth to saturated zone Slope	1.00 0.01	Somewhat limited Too clayey Depth to saturated zone Slope	0.50 0.24 0.01
477C2: Winfield-----	Very limited Depth to saturated zone Too clayey Slope	1.00 0.50 0.01	Very limited Depth to saturated zone Slope	1.00 0.01	Somewhat limited Too clayey Depth to saturated zone Slope	0.50 0.24 0.01
477C3: Winfield-----	Very limited Depth to saturated zone Too clayey Slope	1.00 0.50 0.01	Very limited Depth to saturated zone Slope	1.00 0.01	Somewhat limited Too clayey Depth to saturated zone Slope	0.50 0.24 0.01
477D2: Winfield-----	Very limited Depth to saturated zone Slope Too clayey	1.00 0.96 0.50	Very limited Depth to saturated zone Slope	1.00 0.96	Somewhat limited Slope Too clayey Depth to saturated zone	0.96 0.50 0.24
477D3: Winfield-----	Very limited Depth to saturated zone Slope Too clayey	1.00 0.96 0.50	Very limited Depth to saturated zone Slope	1.00 0.96	Somewhat limited Slope Too clayey Depth to saturated zone	0.96 0.50 0.24
477E3: Winfield-----	Very limited Depth to saturated zone Slope Too clayey	1.00 1.00 0.50	Very limited Slope Depth to saturated zone	1.00 1.00	Very limited Slope Too clayey Depth to saturated zone	1.00 0.50 0.24
477F: Winfield-----	Very limited Depth to saturated zone Slope Too clayey	1.00 1.00 0.50	Very limited Slope Depth to saturated zone	1.00 1.00	Very limited Slope Too clayey Depth to saturated zone	1.00 0.50 0.24

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
717F:						
Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Clarksville-----	Very limited Slope Too clayey	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 1.00 0.96
717G:						
Clarksville-----	Very limited Slope Too clayey	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 1.00 0.96
Stookey-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
801B:						
Orthents-----	Not limited		Not limited		Not limited	
802D:						
Orthents-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37
832F:						
Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
Clarksville-----	Very limited Slope Too clayey	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 1.00 0.96
832G:						
Clarksville-----	Very limited Slope Too clayey	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 1.00 0.96
Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
833F:						
Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
Goss-----	Very limited Slope Too clayey Large stones content	1.00 1.00 0.03	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content Large stones content	1.00 1.00 0.56 0.03

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
833G: Goss-----	Very limited Slope Too clayey Large stones content	1.00 1.00 0.03	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content Large stones content	1.00 1.00 0.56 0.03
Menfro-----	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
864: Pits, quarries-----	Not rated		Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated		Not rated	
1426A: Karnak-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
1843A: Bonnie-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Petrolia-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
1845A: Darwin-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
Jacob-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1846A: Karnak-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
Cape-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3070L: Beaucoup-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
3071A: Darwin-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3071L: Darwin-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3092BL: Sarpy-----	Very limited Flooding Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00
3108A: Bonnie-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Too clayey	1.00 1.00 0.50

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Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3162L: Gorham-----	Very limited Flooding Depth to saturated zone Ponding Seepage, bottom layer Too clayey	1.00 1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Hard to compact Seepage Too clayey	1.00 1.00 1.00 1.00 0.50
3180L: Dupo-----	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00
3284L: Tice-----	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Hard to compact Too clayey	1.00 1.00 0.50
3288L: Petrolia-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
3331A: Haymond-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Not limited	
3331L: Haymond-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Not limited	
3333A: Wakeland-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
3333L: Wakeland-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
3334A: Birds-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3334L: Birds-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
3382A: Belknap-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
3420A: Piopolis-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Too clayey	1.00 1.00 0.50
3422A: Cape-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3422A+: Cape-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3426L: Karnak-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3449L: Armiesburg-----	Very limited Flooding Too clayey	1.00 0.50	Very limited Flooding	1.00	Somewhat limited Too clayey	0.50
Sarpy-----	Very limited Flooding Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00

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Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3452L: Riley-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Too sandy	1.00 1.00 0.50
3456B: Ware-----	Very limited Flooding Seepage, bottom layer	1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Very limited Seepage	1.00
3456BL: Ware-----	Very limited Flooding Seepage, bottom layer	1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Very limited Seepage	1.00
3590L: Cairo-----	Very limited Flooding Depth to saturated zone Ponding Seepage, bottom layer Too clayey	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone Seepage	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
3597L: Armiesburg-----	Very limited Flooding Too clayey	1.00 0.50	Very limited Flooding	1.00	Somewhat limited Too clayey	0.50
3682BL: Medway-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Seepage	0.68 0.22
7084A: Okaw-----	Very limited Depth to saturated zone Ponding Too clayey Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
7122B: Colp-----	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Hard to compact Too clayey Depth to saturated zone	1.00 0.50 0.09

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Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7122C2: Colp-----	Very limited Depth to saturated zone Too clayey Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Too clayey Depth to saturated zone	1.00 0.08
7131A: Alvin-----	Very limited Seepage, bottom layer Flooding	1.00 0.40	Very limited Seepage Flooding	1.00 0.40	Somewhat limited Seepage	0.52
7131B: Alvin-----	Very limited Seepage, bottom layer Flooding	1.00 0.40	Very limited Seepage Flooding	1.00 0.40	Somewhat limited Seepage	0.52
7131C: Alvin-----	Very limited Seepage, bottom layer Flooding Slope	1.00 0.40 0.01	Very limited Seepage Flooding Slope	1.00 0.40 0.01	Somewhat limited Seepage Slope	0.52 0.01
7131C2: Alvin-----	Very limited Seepage, bottom layer Flooding Slope	1.00 0.40 0.01	Very limited Seepage Flooding Slope	1.00 0.40 0.01	Somewhat limited Seepage Slope	0.52 0.01
7131D2: Alvin-----	Very limited Seepage, bottom layer Slope Flooding	1.00 0.96 0.40	Very limited Seepage Slope Flooding	1.00 0.96 0.40	Somewhat limited Slope Seepage	0.96 0.52
7338A: Hurst-----	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Hard to compact Depth to saturated zone Too clayey	1.00 0.88 0.50
7338B: Hurst-----	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Hard to compact Depth to saturated zone Too clayey	1.00 0.88 0.50
7401A: Okaw-----	Very limited Depth to saturated zone Ponding Too clayey Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7460A: Ginat-----	Very limited Depth to saturated zone Ponding Too clayey Flooding	1.00 1.00 0.50 0.40	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
7462A: Scioto ville-----	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.95 0.40	Somewhat limited Depth to saturated zone Flooding	0.44 0.40	Somewhat limited Depth to saturated zone Seepage	0.68 0.52
7462B: Scioto ville-----	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.95 0.40	Somewhat limited Depth to saturated zone Flooding	0.44 0.40	Somewhat limited Depth to saturated zone Seepage	0.68 0.52
7462C2: Scioto ville-----	Very limited Seepage, bottom layer Depth to saturated zone Flooding Slope	1.00 0.95 0.40 0.01	Somewhat limited Depth to saturated zone Flooding Slope	0.44 0.40 0.01	Somewhat limited Depth to saturated zone Seepage Slope	0.68 0.52 0.01
7462C3: Scioto ville-----	Very limited Seepage, bottom layer Depth to saturated zone Flooding Slope	1.00 0.95 0.40 0.01	Somewhat limited Depth to saturated zone Flooding Slope	0.44 0.40 0.01	Somewhat limited Depth to saturated zone Seepage Slope	0.68 0.52 0.01
7462D2: Scioto ville-----	Very limited Seepage, bottom layer Slope Depth to saturated zone Flooding	1.00 0.96 0.95 0.40	Somewhat limited Slope Depth to saturated zone Flooding	0.96 0.44 0.40	Somewhat limited Slope Depth to saturated zone Seepage	0.96 0.68 0.52
7462D3: Scioto ville-----	Very limited Seepage, bottom layer Slope Depth to saturated zone Flooding	1.00 0.96 0.95 0.40	Somewhat limited Slope Depth to saturated zone Flooding	0.96 0.44 0.40	Somewhat limited Slope Depth to saturated zone Seepage	0.96 0.68 0.52

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7463A: Wheeling-----	Very limited Seepage, bottom layer Too clayey Flooding	1.00 0.50 0.40	Somewhat limited Flooding	0.40	Somewhat limited Too clayey	0.50
7463B: Wheeling-----	Very limited Seepage, bottom layer Too clayey Flooding	1.00 0.50 0.40	Somewhat limited Flooding	0.40	Somewhat limited Too clayey	0.50
7463C2: Wheeling-----	Very limited Seepage, bottom layer Too clayey Flooding Slope	1.00 0.50 0.40 0.01	Somewhat limited Flooding Slope	0.40 0.01	Somewhat limited Too clayey Slope	0.50 0.01
7463D3: Wheeling-----	Very limited Seepage, bottom layer Slope Too clayey Flooding	1.00 0.96 0.50 0.40	Somewhat limited Slope Flooding	0.96 0.40	Very limited Seepage Slope Too clayey Gravel content	1.00 0.96 0.50 0.01
7711A: Hatfield-----	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone	1.00
7711B: Hatfield-----	Very limited Depth to saturated zone Too clayey Flooding	1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone	1.00
8070A: Beaucoup-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
8071A: Darwin-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00

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Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8072A: Sharon-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Not limited	
8085A: Jacob-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
8092B: Sarpy-----	Very limited Flooding Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00
8108A: Bonnie-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
8109A: Raccoon-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
8162A: Gorham-----	Very limited Flooding Depth to saturated zone Ponding Seepage, bottom layer Too clayey	1.00 1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Hard to compact Seepage Too clayey	1.00 1.00 1.00 1.00 0.50
8175B: Lamont-----	Very limited Flooding Seepage, bottom layer	1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Somewhat limited Seepage	0.52
8178A: Ruark-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00

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Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8180A: Dupo-----	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00
8184A: Roby-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone	0.86
8184B: Roby-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone	0.86
8284A: Tice-----	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Hard to compact Too clayey	1.00 1.00 0.50
8288A: Petrolia-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
8331A: Haymond-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Not limited	
8333A: Wakeland-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
8334A: Birds-----	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
8382A: Belknap-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8420A: Piopolis-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.50
8422A: Cape-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
8422A+: Cape-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
8426A: Karnak-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
8426A+: Karnak-----	Very limited Flooding Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
8452A: Riley-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey	1.00 0.50
8452B: Riley-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer Too clayey	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey	1.00 0.50

Soil Survey of Alexander County, Illinois

Table 16.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8456B: Ware-----	Very limited Flooding Seepage, bottom layer	1.00 1.00	Very limited Flooding Seepage	1.00 1.00	Very limited Seepage	1.00
8475B: Elsah-----	Very limited Flooding Seepage, bottom layer Large stones content	1.00 1.00 0.12	Very limited Flooding Seepage	1.00 1.00	Very limited Seepage Large stones content Gravel content	1.00 0.12 0.02
8589B: Bowdre-----	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Too clayey Hard to compact Depth to saturated zone	1.00 1.00 0.96
8590A: Cairo-----	Very limited Flooding Depth to saturated zone Ponding Seepage, bottom layer Too clayey	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone Seepage	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00 1.00
8597A: Armiesburg-----	Very limited Flooding Too clayey	1.00 0.50	Very limited Flooding	1.00	Somewhat limited Too clayey	0.50
8682B: Medway-----	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Seepage	0.68 0.22
MW: Miscellaneous water-	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
75C: Drury-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
75C3: Drury-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
75D: Drury-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79B: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79C: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79C2: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79C3: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79D: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79D2: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79D3: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
79E: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79E2: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79E3: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79F: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
164B: Stoy-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
175A: Lamont-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.03
	Thickest layer	0.00	Bottom layer	0.04
175B: Lamont-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.03
	Thickest layer	0.00	Bottom layer	0.04
175C: Lamont-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.03
	Thickest layer	0.00	Bottom layer	0.04
214B: Hosmer-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
214C: Hosmer-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
214C2: Hosmer-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
214C3: Hosmer-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
214D2: Hosmer-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
214D3: Hosmer-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216D: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216D2: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216E: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216E2: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216E3: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216F: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216G: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
471F: Clarksville-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
471G: Clarksville-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
477B: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
477C: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477C2: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477C3: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477D2: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477D3: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477E3: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477F: Winfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
717F: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Clarksville-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
717G: Clarksville-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
717G: Stookey-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
801B: Orthents-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
802D: Orthents-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
832F: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Clarksville-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
832G: Clarksville-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
833F: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Goss-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
833G: Goss-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
833G: Menfro-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
864: Pits, quarries-----	Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated	
1426A: Karnak-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
1843A: Bonnie-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Petrolia-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
1845A: Darwin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
1845A: Jacob-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
1846A: Karnak-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Cape-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3070L: Beaucoup-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3071A: Darwin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3071L: Darwin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3092BL: Sarpy-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.12
	Thickest layer	0.00	Bottom layer	0.51
3108A: Bonnie-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3162L: Gorham-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.28
3180L: Dupo-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3284L: Tice-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3288L: Petrolia-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3331A: Haymond-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
3331L: Haymond-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3333A: Wakeland-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3333L: Wakeland-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3334A: Birds-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3334L: Birds-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3382A: Belknap-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3420A: Piopolis-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3422A: Cape-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3422A+: Cape-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3426L: Karnak-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3449L: Armiesburg-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Sarpy-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.12
	Thickest layer	0.00	Bottom layer	0.51

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
3452L: Riley-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.10
3456B: Ware-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3456BL: Ware-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3590L: Cairo-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.08
3597L: Armiesburg-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3682BL: Medway-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7084A: Okaw-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7122B: Colp-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7122C2: Colp-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7131A: Alvin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.25
7131B: Alvin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.25
7131C: Alvin-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.03
	Thickest layer	0.00	Bottom layer	0.25

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
7131C2: Alvin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.25
7131D2: Alvin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.25
7338A: Hurst-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7338B: Hurst-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7401A: Okaw-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7460A: Ginat-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7462A: Sciotoville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7462B: Sciotoville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7462C2: Sciotoville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7462C3: Sciotoville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7462D2: Sciotoville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7462D3: Sciotoville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
7463A: Wheeling-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
7463B: Wheeling-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
7463C2: Wheeling-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
7463D3: Wheeling-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
7711A: Hatfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7711B: Hatfield-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8070A: Beaucoup-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8071A: Darwin-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8072A: Sharon-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8085A: Jacob-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8092B: Sarpy-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.12
	Thickest layer	0.00	Bottom layer	0.51
8108A: Bonnie-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
8109A: Raccoon-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8162A: Gorham-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.28
8175B: Lamont-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.04
8178A: Ruark-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8180A: Dupo-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8184A: Roby-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8184B: Roby-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8284A: Tice-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8288A: Petrolia-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8331A: Haymond-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8333A: Wakeland-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8334A: Birds-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
8382A: Belknap-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8420A: Piopolis-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8422A: Cape-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8422A+: Cape-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8426A: Karnak-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8426A+: Karnak-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8452A: Riley-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.10
8452B: Riley-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.10
8456B: Ware-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8475B: Elsah-----	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
8589B: Bowdre-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8590A: Cairo-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.08

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part I—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
8597A: Armiesburg-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8682B: Medway-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
MW: Miscellaneous water-	Not rated		Not rated	
W: Water-----	Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Fair		Good		Good	
	Organic matter	0.02				
	content low					
	Water erosion	0.68				
75C3: Drury-----	Fair		Good		Good	
	Organic matter	0.02				
	content low					
	Water erosion	0.68				
75D: Drury-----	Fair		Good		Fair	
	Organic matter	0.02			Slope	0.04
	content low					
	Water erosion	0.68				
79B: Menfro-----	Fair		Poor		Good	
	Organic matter	0.12	Low strength	0.00		
	content low		Shrink-swell	0.87		
	Water erosion	0.90				
	Too acid	0.97				
79C: Menfro-----	Fair		Poor		Good	
	Organic matter	0.12	Low strength	0.00		
	content low		Shrink-swell	0.97		
	Water erosion	0.90				
	Too acid	0.97				
79C2: Menfro-----	Fair		Poor		Good	
	Organic matter	0.12	Low strength	0.00		
	content low		Shrink-swell	0.87		
	Water erosion	0.90				
	Too acid	0.97				
79C3: Menfro-----	Fair		Poor		Good	
	Organic matter	0.12	Low strength	0.00		
	content low		Shrink-swell	0.89		
	Water erosion	0.90				
	Too acid	0.97				
79D: Menfro-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Slope	0.04
	content low		Shrink-swell	0.87		
	Water erosion	0.90				
	Too acid	0.97				

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79D2: Menfro-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Slope	0.04
	content low		Shrink-swell	0.87		
	Water erosion	0.90				
	Too acid	0.97				
79D3: Menfro-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Slope	0.04
	content low		Shrink-swell	0.89		
	Water erosion	0.90				
	Too acid	0.97				
79E: Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Low strength	0.00	Slope	0.00
	content low		Slope	0.18		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
79E2: Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Low strength	0.00	Slope	0.00
	content low		Slope	0.18		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
79E3: Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Low strength	0.00	Slope	0.00
	content low		Slope	0.18		
	Water erosion	0.90	Shrink-swell	0.89		
	Too acid	0.97				
79F: Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Slope	0.00	Slope	0.00
	content low		Low strength	0.00		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
164B: Stoy-----	Fair		Poor		Fair	
	Organic matter	0.08	Low strength	0.00	Wetness depth	0.53
	content low		Wetness depth	0.53	Too clayey	0.64
	Too acid	0.32	Shrink-swell	0.99	Too acid	0.88
	Water erosion	0.90				
	Too clayey	0.98				
175A: Lamont-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Organic matter	0.12				
	content low					
	Too acid	0.84				

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
175B: Lamont-----	Poor Too sandy Organic matter content low Too acid	0.00 0.12 0.84	Good		Poor Too sandy	0.00
175C: Lamont-----	Poor Too sandy Organic matter content low Too acid	0.00 0.12 0.84	Good		Poor Too sandy	0.00
214B: Hosmer-----	Fair Too acid Depth to cemented pan Organic matter content low Water erosion Droughty	0.32 0.36 0.50 0.90 0.99	Poor Depth to cemented pan Low strength Shrink-swell Wetness depth	0.00 0.22 0.87 0.91	Fair Depth to cemented pan Too acid Wetness depth	0.36 0.88 0.91
214C: Hosmer-----	Fair Too acid Depth to cemented pan Organic matter content low Water erosion Droughty	0.32 0.36 0.50 0.90 0.99	Poor Depth to cemented pan Low strength Shrink-swell Wetness depth	0.00 0.22 0.87 0.91	Fair Depth to cemented pan Too acid Wetness depth	0.36 0.88 0.91
214C2: Hosmer-----	Fair Depth to cemented pan Too acid Organic matter content low Droughty Water erosion	0.14 0.32 0.50 0.84 0.90	Poor Depth to cemented pan Low strength Shrink-swell Wetness depth	0.00 0.22 0.87 0.91	Fair Depth to cemented pan Too acid Wetness depth	0.14 0.88 0.91
214C3: Hosmer-----	Fair Depth to cemented pan Too acid Organic matter content low Droughty Water erosion	0.14 0.32 0.50 0.70 0.90	Poor Depth to cemented pan Low strength Wetness depth Shrink-swell	0.00 0.22 0.91 0.93	Fair Depth to cemented pan Too acid Wetness depth	0.14 0.88 0.91

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214D2: Hosmer-----	Fair		Poor		Fair	
	Depth to cemented pan	0.14	Depth to cemented pan	0.00	Slope	0.04
	Too acid	0.32	Low strength	0.22	Depth to cemented pan	0.14
	Organic matter content low	0.50	Shrink-swell	0.87	Too acid	0.88
	Droughty	0.84	Wetness depth	0.91	Wetness depth	0.91
	Water erosion	0.90				
214D3: Hosmer-----	Fair		Poor		Fair	
	Depth to cemented pan	0.05	Depth to cemented pan	0.00	Slope	0.04
	Too acid	0.32	Low strength	0.22	Depth to cemented pan	0.05
	Organic matter content low	0.50	Shrink-swell	0.87	Too acid	0.88
	Droughty	0.62	Wetness depth	0.91	Wetness depth	0.91
	Water erosion	0.90				
216D: Stookey-----	Fair		Poor		Fair	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.04
	Water erosion	0.68				
	Too acid	0.68				
216D2: Stookey-----	Fair		Poor		Fair	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.04
	Water erosion	0.68				
	Too acid	0.68				
216E: Stookey-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.00
	Water erosion	0.68	Slope	0.18		
	Too acid	0.68				
216E2: Stookey-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.00
	Water erosion	0.68	Slope	0.18		
	Too acid	0.68				
216E3: Stookey-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.00
	Water erosion	0.68	Slope	0.18		
	Too acid	0.68				
216F: Stookey-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Slope	0.00	Slope	0.00
	Water erosion	0.68	Low strength	0.00		
	Too acid	0.68				

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
216G: Stookey-----	Fair		Poor		Poor	
	Organic matter	0.12	Slope	0.00	Slope	0.00
	content low		Low strength	0.00		
	Water erosion	0.68				
	Too acid	0.68				
471F: Clarksville-----	Fair		Poor		Poor	
	Organic matter	0.11	Slope	0.00	Slope	0.00
	content low		Shrink-swell	0.98	Hard to reclaim	0.00
	Too acid	0.50			(rock fragments)	
					Rock fragments	0.03
					Too acid	0.76
471G: Clarksville-----	Fair		Poor		Poor	
	Organic matter	0.11	Slope	0.00	Slope	0.00
	content low		Shrink-swell	0.98	Hard to reclaim	0.00
	Too acid	0.50			(rock fragments)	
					Rock fragments	0.03
					Too acid	0.76
477B: Winfield-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Wetness depth	0.98
	content low		Shrink-swell	0.90		
	Too acid	0.68	Wetness depth	0.98		
	Water erosion	0.99				
477C: Winfield-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Wetness depth	0.98
	content low		Shrink-swell	0.90		
	Too acid	0.68	Wetness depth	0.98		
	Water erosion	0.99				
477C2: Winfield-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Wetness depth	0.98
	content low		Shrink-swell	0.93		
	Too acid	0.68	Wetness depth	0.98		
	Water erosion	0.99				
477C3: Winfield-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Wetness depth	0.98
	content low		Shrink-swell	0.94		
	Too acid	0.68	Wetness depth	0.98		
	Water erosion	0.99				
477D2: Winfield-----	Fair		Poor		Fair	
	Organic matter	0.12	Low strength	0.00	Slope	0.04
	content low		Shrink-swell	0.93	Wetness depth	0.98
	Too acid	0.68	Wetness depth	0.98		
	Water erosion	0.99				

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
477D3: Winfield-----	Fair		Poor		Fair	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.04
	Too acid	0.68	Shrink-swell	0.94	Wetness depth	0.98
	Water erosion	0.99	Wetness depth	0.98		
477E3: Winfield-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.00
	Too acid	0.68	Slope	0.18	Wetness depth	0.98
	Water erosion	0.99	Shrink-swell	0.94		
			Wetness depth	0.98		
477F: Winfield-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Slope	0.00	Slope	0.00
	Too acid	0.68	Low strength	0.00	Wetness depth	0.98
	Water erosion	0.99	Shrink-swell	0.90		
			Wetness depth	0.98		
717F: Stookey-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Low strength	0.00	Slope	0.00
	Water erosion	0.68	Slope	0.00		
	Too acid	0.68				
Clarksville-----	Fair		Poor		Poor	
	Organic matter content low	0.11	Slope	0.00	Slope	0.00
	Too acid	0.50	Shrink-swell	0.98	Hard to reclaim (rock fragments)	0.00
					Rock fragments	0.03
					Too acid	0.76
717G: Clarksville-----	Fair		Poor		Poor	
	Organic matter content low	0.11	Slope	0.00	Slope	0.00
	Too acid	0.50	Shrink-swell	0.98	Hard to reclaim (rock fragments)	0.00
					Rock fragments	0.03
					Too acid	0.76
Stookey-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Slope	0.00	Slope	0.00
	Water erosion	0.68	Low strength	0.00		
	Too acid	0.68				
801B: Orthents-----	Fair		Poor		Good	
	Organic matter content low	0.12	Low strength	0.00		
	Too acid	0.84	Shrink-swell	0.87		
	Water erosion	0.90				
802D: Orthents-----	Fair		Poor		Fair	
	Organic matter content low	0.50	Low strength	0.00	Slope	0.63
	Water erosion	0.90	Shrink-swell	0.87		

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
832F: Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Low strength	0.00	Slope	0.00
	content low		Slope	0.00		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
Clarksville-----	Fair		Poor		Poor	
	Organic matter	0.11	Slope	0.00	Slope	0.00
	content low		Shrink-swell	0.98	Hard to reclaim	0.00
	Too acid	0.50			(rock fragments)	
					Rock fragments	0.03
					Too acid	0.76
832G: Clarksville-----	Fair		Poor		Poor	
	Organic matter	0.11	Slope	0.00	Slope	0.00
	content low		Shrink-swell	0.98	Hard to reclaim	0.00
	Too acid	0.50			(rock fragments)	
					Rock fragments	0.03
					Too acid	0.76
Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Slope	0.00	Slope	0.00
	content low		Low strength	0.00		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
833F: Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Low strength	0.00	Slope	0.00
	content low		Slope	0.00		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
Goss-----	Poor		Poor		Poor	
	Too clayey	0.00	Slope	0.00	Slope	0.00
	Organic matter	0.12	Cobble content	0.44	Rock fragments	0.00
	content low		Shrink-swell	0.97	Hard to reclaim	0.00
	Too acid	0.54			(rock fragments)	
	Droughty	0.99			Too clayey	0.00
					Too acid	0.98
833G: Goss-----	Poor		Poor		Poor	
	Too clayey	0.00	Slope	0.00	Slope	0.00
	Organic matter	0.12	Cobble content	0.44	Rock fragments	0.00
	content low		Shrink-swell	0.97	Hard to reclaim	0.00
	Too acid	0.54			(rock fragments)	
	Droughty	0.99			Too clayey	0.00
					Too acid	0.98
Menfro-----	Fair		Poor		Poor	
	Organic matter	0.12	Slope	0.00	Slope	0.00
	content low		Low strength	0.00		
	Water erosion	0.90	Shrink-swell	0.87		
	Too acid	0.97				
864: Pits, quarries-----	Not rated		Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
865: Pits, gravel-----	Not rated		Not rated		Not rated	
1426A: Karnak-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
	Organic matter	0.12	Low strength	0.00	Wetness depth	0.00
	content low		Shrink-swell	0.12		
	Too acid	0.84				
1843A: Bonnie-----	Fair		Poor		Poor	
	Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
	Organic matter	0.50	Low strength	0.00	Too acid	0.88
	content low					
	Water erosion	0.68				
Petrolia-----	Fair		Poor		Poor	
	Organic matter	0.68	Wetness depth	0.00	Wetness depth	0.00
	content low		Low strength	0.00	Too clayey	0.67
	Too clayey	0.98	Shrink-swell	0.87		
1845A: Darwin-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
			Low strength	0.00	Wetness depth	0.00
			Shrink-swell	0.00		
Jacob-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
	Too acid	0.12	Shrink-swell	0.00	Wetness depth	0.00
			Low strength	0.00	Too acid	0.59
1846A: Karnak-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
	Organic matter	0.12	Low strength	0.00	Wetness depth	0.00
	content low		Shrink-swell	0.12		
	Too acid	0.84				
Cape-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.50	Low strength	0.00	Too clayey	0.00
	Organic matter	0.50	Shrink-swell	0.28	Too acid	0.59
	content low					
3070L: Beaucoup-----	Fair		Poor		Poor	
	Too clayey	0.98	Wetness depth	0.00	Wetness depth	0.00
			Low strength	0.22	Too clayey	0.76
			Shrink-swell	0.87		
3071A: Darwin-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
			Low strength	0.00	Wetness depth	0.00
			Shrink-swell	0.00		

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3071L: Darwin-----	Poor Too clayey	0.00	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.00	Poor Too clayey Wetness depth	0.00 0.00
3092BL: Sarpy-----	Poor Too sandy Wind erosion Organic matter content low Droughty	0.00 0.00 0.12 0.98	Good		Poor Too sandy	0.00
3108A: Bonnie-----	Fair Too acid Organic matter content low Water erosion	0.50 0.50 0.68	Poor Wetness depth Low strength	0.00 0.00	Poor Wetness depth Too acid	0.00 0.88
3162L: Gorham-----	Fair Too clayey Organic matter content low	0.50 0.68	Poor Wetness depth Shrink-swell	0.00 0.92	Poor Wetness depth Too clayey	0.00 0.34
3180L: Dupo-----	Fair Water erosion Organic matter content low	0.68 0.68	Poor Low strength Wetness depth Shrink-swell	0.00 0.03 0.61	Fair Wetness depth	0.03
3284L: Tice-----	Fair Organic matter content low Too clayey	0.50 0.98	Fair Wetness depth Low strength Shrink-swell	0.04 0.22 0.87	Fair Wetness depth Too clayey	0.04 0.64
3288L: Petrolia-----	Fair Organic matter content low Too clayey	0.68 0.98	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.87	Poor Wetness depth Too clayey	0.00 0.67
3331A: Haymond-----	Fair Water erosion	0.68	Good		Good	
3331L: Haymond-----	Fair Water erosion	0.68	Good		Good	
3333A: Wakeland-----	Fair Organic matter content low Water erosion	0.50 0.68	Fair Wetness depth	0.04	Fair Wetness depth	0.04

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3333L: Wakeland-----	Fair Organic matter content low Water erosion	0.50 0.68	Fair Wetness depth	0.04	Fair Wetness depth	0.04
3334A: Birds-----	Fair Water erosion	0.68	Poor Wetness depth Low strength	0.00 0.00	Poor Wetness depth	0.00
3334L: Birds-----	Fair Water erosion	0.68	Poor Wetness depth Low strength	0.00 0.00	Poor Wetness depth	0.00
3382A: Belknap-----	Fair Too acid Organic matter content low Water erosion	0.50 0.50 0.68	Poor Low strength Wetness depth	0.00 0.04	Fair Wetness depth Too acid	0.04 0.95
3420A: Piopolis-----	Fair Too acid Too clayey	0.50 0.92	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.87	Poor Wetness depth Too clayey Too acid	0.00 0.72 0.88
3422A: Cape-----	Poor Too clayey Too acid Organic matter content low	0.00 0.50 0.50	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.28	Poor Wetness depth Too clayey Too acid	0.00 0.00 0.59
3422A+: Cape-----	Poor Too clayey Too acid Organic matter content low Water erosion	0.00 0.50 0.50 0.90	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.38	Poor Wetness depth Too clayey Too acid	0.00 0.00 0.59
3426L: Karnak-----	Poor Too clayey Organic matter content low Too acid	0.00 0.12 0.84	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.12	Poor Too clayey Wetness depth	0.00 0.00
3449L: Armiesburg-----	Fair Organic matter content low Too clayey	0.88 0.92	Poor Low strength Shrink-swell	0.00 0.87	Fair Too clayey	0.66

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3449L: Sarpy-----	Poor Too sandy Wind erosion Organic matter content low Droughty	0.00 0.00 0.12 0.98	Good		Poor Too sandy	0.00
3452L: Riley-----	Fair Too sandy Organic matter content low	0.22 0.50	Fair Wetness depth	0.12	Fair Wetness depth Too sandy	0.12 0.22
3456B: Ware-----	Fair Organic matter content low	0.24	Good		Good	
3456BL: Ware-----	Fair Organic matter content low	0.24	Good		Good	
3590L: Cairo-----	Poor Too clayey Droughty	0.00 0.12	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.12	Poor Too clayey Wetness depth	0.00 0.00
3597L: Armiesburg-----	Fair Organic matter content low Too clayey	0.88 0.92	Poor Low strength Shrink-swell	0.00 0.87	Fair Too clayey	0.66
3682BL: Medway-----	Fair Organic matter content low Too clayey	0.12 0.92	Fair Wetness depth	0.76	Fair Wetness depth Too clayey Rock fragments	0.76 0.92 0.97
7084A: Okaw-----	Poor Too clayey Organic matter content low Too acid Water erosion	0.00 0.12 0.68 0.90	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.25	Poor Wetness depth Too clayey	0.00 0.00
7122B: Colp-----	Fair Too clayey Organic matter content low Water erosion Too acid	0.02 0.12 0.68 0.97	Poor Low strength Shrink-swell	0.00 0.17	Fair Too clayey	0.01

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7122C2: Colp-----	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter content low	0.12	Shrink-swell	0.12	Too acid	0.98
	Too acid	0.54				
	Water erosion	0.90				
7131A: Alvin-----	Fair		Good		Good	
	Organic matter content low	0.12				
	Too acid	0.88				
7131B: Alvin-----	Fair		Good		Good	
	Organic matter content low	0.12				
	Too acid	0.88				
7131C: Alvin-----	Fair		Good		Good	
	Organic matter content low	0.12				
	Too acid	0.88				
7131C2: Alvin-----	Fair		Good		Good	
	Organic matter content low	0.12				
	Too acid	0.88				
7131D2: Alvin-----	Fair		Good		Fair	
	Organic matter content low	0.12			Slope	0.04
	Too acid	0.88				
7338A: Hurst-----	Fair		Poor		Fair	
	Too clayey	0.08	Low strength	0.00	Too clayey	0.05
	Organic matter content low	0.12	Shrink-swell	0.17	Wetness depth	0.50
	Too acid	0.20	Wetness depth	0.50		
	Water erosion	0.90				
7338B: Hurst-----	Fair		Poor		Fair	
	Too clayey	0.08	Low strength	0.00	Too clayey	0.05
	Organic matter content low	0.12	Shrink-swell	0.17	Wetness depth	0.50
	Too acid	0.20	Wetness depth	0.50		
	Water erosion	0.90				
7401A: Okaw-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.12	Low strength	0.00	Too clayey	0.00
	Too acid	0.68	Shrink-swell	0.34		
	Water erosion	0.68				

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7460A: Ginat-----	Fair Too acid Water erosion	 0.32 0.90	Poor Wetness depth Low strength	 0.00 0.00	Poor Wetness depth	 0.00
7462A: Sciotoville-----	Fair Organic matter content low Too acid Water erosion	 0.12 0.32 0.99	Fair Wetness depth	 0.76	Fair Wetness depth Too acid Hard to reclaim (rock fragments)	 0.76 0.88 0.95
7462B: Sciotoville-----	Fair Organic matter content low Too acid Water erosion	 0.12 0.32 0.99	Fair Wetness depth	 0.76	Fair Wetness depth Too acid Hard to reclaim (rock fragments)	 0.76 0.88 0.95
7462C2: Sciotoville-----	Fair Organic matter content low Too acid Water erosion	 0.12 0.32 0.99	Fair Wetness depth	 0.76	Fair Wetness depth Hard to reclaim (rock fragments) Too acid	 0.76 0.95 0.98
7462C3: Sciotoville-----	Fair Organic matter content low Too acid Water erosion	 0.12 0.32 0.99	Fair Wetness depth	 0.76	Fair Wetness depth Hard to reclaim (rock fragments) Too acid	 0.76 0.95 0.98
7462D2: Sciotoville-----	Fair Organic matter content low Too acid Water erosion	 0.12 0.32 0.99	Fair Wetness depth	 0.76	Fair Slope Wetness depth Hard to reclaim (rock fragments) Too acid	 0.04 0.76 0.95 0.98
7462D3: Sciotoville-----	Fair Organic matter content low Too acid Water erosion	 0.12 0.32 0.99	Fair Wetness depth	 0.76	Fair Slope Wetness depth Hard to reclaim (rock fragments) Too acid	 0.04 0.76 0.95 0.98
7463A: Wheeling-----	Fair Organic matter content low Too acid	 0.12 0.74	Good		Poor Hard to reclaim (rock fragments) Rock fragments	 0.00 0.88
7463B: Wheeling-----	Fair Organic matter content low Too acid	 0.12 0.74	Good		Poor Hard to reclaim (rock fragments) Rock fragments	 0.00 0.88

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7463C2: Wheeling-----	Fair		Good		Poor	
	Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
	Too acid	0.74			Rock fragments	0.88
7463D3: Wheeling-----	Fair		Good		Poor	
	Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
	Too acid	0.74			Slope	0.04
					Rock fragments	0.88
7711A: Hatfield-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.32	Low strength	0.00	Too acid	0.88
	Water erosion	0.90				
7711B: Hatfield-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.32	Low strength	0.00	Too acid	0.88
	Water erosion	0.90				
8070A: Beaucoup-----	Fair		Poor		Poor	
	Too clayey	0.98	Wetness depth	0.00	Wetness depth	0.00
			Low strength	0.22	Too clayey	0.76
			Shrink-swell	0.87		
8071A: Darwin-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
			Low strength	0.00	Wetness depth	0.00
			Shrink-swell	0.00		
8072A: Sharon-----	Fair		Good		Fair	
	Organic matter content low	0.24			Too acid	0.88
	Too acid	0.50				
	Water erosion	0.68				
8085A: Jacob-----	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Too clayey	0.00
	Too acid	0.12	Shrink-swell	0.00	Wetness depth	0.00
			Low strength	0.00	Too acid	0.59
8092B: Sarpy-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Organic matter content low	0.12				
	Droughty	0.98				

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8108A: Bonnie-----	Fair		Poor		Poor	
	Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.50	Low strength	0.00	Too acid	0.88
	Water erosion	0.68				
8109A: Raccoon-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.32	Low strength	0.00		
	Water erosion	0.68	Shrink-swell	0.99		
8162A: Gorham-----	Fair		Poor		Poor	
	Too clayey	0.50	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.68	Shrink-swell	0.92	Too clayey	0.34
8175B: Lamont-----	Fair		Good		Good	
	Organic matter content low	0.12				
	Too acid	0.97				
8178A: Ruark-----	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.54			Too acid	0.98
8180A: Dupo-----	Fair		Poor		Fair	
	Water erosion	0.68	Low strength	0.00	Wetness depth	0.03
	Organic matter content low	0.68	Wetness depth	0.03		
			Shrink-swell	0.61		
8184A: Roby-----	Fair		Fair		Fair	
	Organic matter content low	0.18	Wetness depth	0.53	Wetness depth	0.53
	Too acid	0.54				
8184B: Roby-----	Fair		Fair		Fair	
	Organic matter content low	0.18	Wetness depth	0.53	Wetness depth	0.53
	Too acid	0.54				
8284A: Tice-----	Fair		Fair		Fair	
	Organic matter content low	0.50	Wetness depth	0.04	Wetness depth	0.04
	Too clayey	0.98	Low strength	0.22	Too clayey	0.64
			Shrink-swell	0.87		
8288A: Petrolia-----	Fair		Poor		Poor	
	Organic matter content low	0.68	Wetness depth	0.00	Wetness depth	0.00
	Too clayey	0.98	Low strength	0.00	Too clayey	0.67
			Shrink-swell	0.87		

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8331A: Haymond-----	Fair Water erosion	0.68	Good		Good	
8333A: Wakeland-----	Fair Organic matter content low Water erosion	0.50 0.68	Fair Wetness depth	0.04	Fair Wetness depth	0.04
8334A: Birds-----	Fair Water erosion	0.68	Poor Wetness depth Low strength	0.00 0.00	Poor Wetness depth	0.00
8382A: Belknap-----	Fair Too acid Organic matter content low Water erosion	0.50 0.50 0.68	Poor Low strength Wetness depth	0.00 0.04	Fair Wetness depth Too acid	0.04 0.95
8420A: Piopolis-----	Fair Too acid Too clayey	0.50 0.92	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.87	Poor Wetness depth Too clayey Too acid	0.00 0.72 0.88
8422A: Cape-----	Poor Too clayey Too acid Organic matter content low	0.00 0.50 0.50	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.28	Poor Wetness depth Too clayey Too acid	0.00 0.00 0.59
8422A+: Cape-----	Poor Too clayey Too acid Organic matter content low Water erosion	0.00 0.50 0.50 0.90	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.38	Poor Wetness depth Too clayey Too acid	0.00 0.00 0.59
8426A: Karnak-----	Poor Too clayey Organic matter content low Too acid	0.00 0.12 0.84	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.12	Poor Too clayey Wetness depth	0.00 0.00
8426A+: Karnak-----	Poor Too clayey Organic matter content low Too acid	0.00 0.12 0.84	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.20	Poor Too clayey Wetness depth	0.00 0.00
8452A: Riley-----	Poor Droughty Too clayey	0.00 0.98	Fair Wetness depth Shrink-swell	0.12 0.87	Fair Wetness depth Too clayey	0.12 0.98

Soil Survey of Alexander County, Illinois

Table 17.—Construction Materials, Part II—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8452B: Riley-----	Poor Droughty Too clayey	0.00 0.98	Fair Wetness depth Shrink-swell	0.12 0.87	Fair Wetness depth Too clayey	0.12 0.98
8456B: Ware-----	Fair Organic matter content low	0.24	Good		Good	
8475B: Elsah-----	Fair Organic matter content low Water erosion Cobble content	0.12 0.68 0.98	Fair Cobble content	0.92	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.00
8589B: Bowdre-----	Poor Too clayey Droughty	0.00 0.00	Poor Low strength Shrink-swell Wetness depth	0.00 0.12 0.29	Poor Too clayey Wetness depth	0.00 0.29
8590A: Cairo-----	Poor Too clayey Droughty	0.00 0.12	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.12	Poor Too clayey Wetness depth	0.00 0.00
8597A: Armiesburg-----	Fair Organic matter content low Too clayey	0.88 0.92	Poor Low strength Shrink-swell	0.00 0.87	Fair Too clayey	0.66
8682B: Medway-----	Fair Organic matter content low Too clayey	0.12 0.92	Fair Wetness depth	0.76	Fair Wetness depth Too clayey Rock fragments	0.76 0.92 0.97
MW: Miscellaneous water-	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
75C3: Drury-----	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
75D: Drury-----	Somewhat limited Seepage Slope	0.72 0.02	Very limited Piping	1.00	Very limited Depth to water	1.00
79B: Menfro-----	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
79C: Menfro-----	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
79C2: Menfro-----	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.04	Very limited Depth to water	1.00
79C3: Menfro-----	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.05	Very limited Depth to water	1.00
79D: Menfro-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
79D2: Menfro-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Piping	0.04	Very limited Depth to water	1.00
79D3: Menfro-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Piping	0.05	Very limited Depth to water	1.00
79E: Menfro-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
79E2: Menfro-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.04	Very limited Depth to water	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79E3: Menfro-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.04	Very limited Depth to water	1.00
79F: Menfro-----	Somewhat limited Seepage Slope	0.72 0.50	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
164B: Stoy-----	Not limited		Very limited Depth to saturated zone Piping	1.00 0.01	Very limited Depth to water	1.00
175A: Lamont-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.04	Very limited Depth to water	1.00
175B: Lamont-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.04	Very limited Depth to water	1.00
175C: Lamont-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.04	Very limited Depth to water	1.00
214B: Hosmer-----	Somewhat limited Depth to fragipan Seepage	0.91 0.72	Very limited Piping Thin layer Depth to saturated zone	1.00 0.91 0.84	Very limited Depth to water	1.00
214C: Hosmer-----	Somewhat limited Depth to fragipan Seepage	0.91 0.72	Very limited Piping Thin layer Depth to saturated zone	1.00 0.91 0.84	Very limited Depth to water	1.00
214C2: Hosmer-----	Somewhat limited Depth to fragipan Seepage	0.97 0.72	Very limited Piping Thin layer Depth to saturated zone	1.00 0.97 0.84	Very limited Depth to water	1.00
214C3: Hosmer-----	Somewhat limited Depth to fragipan Seepage	0.97 0.72	Very limited Piping Thin layer Depth to saturated zone	1.00 0.97 0.84	Very limited Depth to water	1.00
214D2: Hosmer-----	Somewhat limited Depth to fragipan Seepage Slope	0.97 0.72 0.02	Very limited Piping Thin layer Depth to saturated zone	1.00 0.97 0.84	Very limited Depth to water	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214D3: Hosmer-----	Somewhat limited Depth to fragipan Seepage Slope	0.99 0.72 0.02	Very limited Piping Thin layer Depth to saturated zone	1.00 0.99 0.84	Very limited Depth to water	1.00
216D: Stookey-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
216D2: Stookey-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
216E: Stookey-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
216E2: Stookey-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
216E3: Stookey-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
216F: Stookey-----	Somewhat limited Seepage Slope	0.72 0.50	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
216G: Stookey-----	Very limited Slope Seepage	1.00 0.72	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
471F: Clarksville----	Very limited Seepage Slope	1.00 0.36	Not limited		Very limited Depth to water	1.00
471G: Clarksville----	Very limited Seepage Slope	1.00 1.00	Not limited		Very limited Depth to water	1.00
477B: Winfield-----	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.68 0.08	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
477C: Winfield-----	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.68 0.08	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
477C2: Winfield-----	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.68 0.08	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
477C3: Winfield-----	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.68 0.11	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
477D2: Winfield-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Depth to saturated zone Piping	0.68 0.10	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
477D3: Winfield-----	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Depth to saturated zone Piping	0.68 0.10	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
477E3: Winfield-----	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Depth to saturated zone Piping	0.68 0.11	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
477F: Winfield-----	Somewhat limited Seepage Slope	0.72 0.50	Somewhat limited Depth to saturated zone Piping	0.68 0.08	Somewhat limited Slow refill Depth to saturated zone Cutbanks cave	0.28 0.14 0.10
717F: Stookey-----	Somewhat limited Seepage Slope	0.72 0.36	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
Clarksville-----	Very limited Seepage Slope	1.00 0.36	Not limited		Very limited Depth to water	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
717G: Clarksville-----	Very limited Seepage Slope	1.00 1.00	Not limited		Very limited Depth to water	1.00
Stookey-----	Very limited Slope Seepage	1.00 0.72	Somewhat limited Piping	0.94	Very limited Depth to water	1.00
801B: Orthents-----	Somewhat limited Seepage	0.54	Somewhat limited Piping	0.50	Very limited Depth to water	1.00
802D: Orthents-----	Somewhat limited Seepage Slope	0.04 0.01	Somewhat limited Piping	0.50	Very limited Depth to water	1.00
832F: Menfro-----	Somewhat limited Seepage Slope	0.72 0.36	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
Clarksville-----	Very limited Seepage Slope	1.00 0.36	Not limited		Very limited Depth to water	1.00
832G: Clarksville-----	Very limited Seepage Slope	1.00 1.00	Not limited		Very limited Depth to water	1.00
Menfro-----	Very limited Slope Seepage	1.00 0.72	Somewhat limited Piping	0.03	Very limited Depth to water	1.00
833F: Menfro-----	Somewhat limited Seepage Slope	0.72 0.36	Somewhat limited Piping	0.91	Very limited Depth to water	1.00
Goss-----	Very limited Seepage Slope	1.00 0.36	Somewhat limited Large stones content	0.03	Very limited Depth to water	1.00
833G: Goss-----	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones content	0.03	Very limited Depth to water	1.00
Menfro-----	Very limited Slope Seepage	1.00 0.72	Somewhat limited Piping	0.91	Very limited Depth to water	1.00
864: Pits, quarries--	Not rated		Not rated		Not rated	
865: Pits, gravel----	Not rated		Not rated		Not rated	

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1426A: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.70	Very limited Slow refill Cutbanks cave	1.00 0.10
1843A: Bonnie-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.98	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Petrolia-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.13	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
1845A: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.97	Very limited Slow refill Cutbanks cave	1.00 0.10
Jacob-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.97	Very limited Depth to water	1.00
1846A: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.70	Very limited Slow refill Cutbanks cave	1.00 0.10
Cape-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.82	Very limited Slow refill Cutbanks cave	1.00 0.10
3070L: Beaucoup-----	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
3071A: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.97	Very limited Slow refill Cutbanks cave	1.00 0.10

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3071L: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.97	Very limited Slow refill Cutbanks cave	1.00 0.10
3092BL: Sarpy-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.51	Very limited Depth to water	1.00
3108A: Bonnie-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.98	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
3162L: Gorham-----	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Piping Seepage	1.00 1.00 0.56 0.28	Very limited Cutbanks cave	1.00
3180L: Dupo-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Hard to pack	1.00 0.32	Very limited Depth to water	1.00
3284L: Tice-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.20	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
3288L: Petrolia-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.13	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
3331A: Haymond-----	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
3331L: Haymond-----	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
3333A: Wakeland-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3333L: Wakeland-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
3334A: Birds-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.95	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
3334L: Birds-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.95	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
3382A: Belknap-----	Somewhat limited Seepage	0.54	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.46 0.10
3420A: Piopolis-----	Not limited		Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
3422A: Cape-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.82	Very limited Slow refill Cutbanks cave	1.00 0.10
3422A+: Cape-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.60	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
3426L: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.70	Very limited Slow refill Cutbanks cave	1.00 0.10
3449L: Armiesburg-----	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
Sarpy-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.51	Very limited Depth to water	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3452L: Riley-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.10	Very limited Cutbanks cave	1.00
3456B: Ware-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
3456BL: Ware-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
3590L: Cairo-----	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Hard to pack Thin layer Seepage	1.00 1.00 1.00 0.86 0.08	Somewhat limited Cutbanks cave	0.10
3597L: Armiesburg-----	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
3682BL: Medway-----	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.95	Somewhat limited Cutbanks cave Depth to saturated zone	0.10 0.02
7084A: Okaw-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.66	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
7122B: Colp-----	Not limited		Somewhat limited Hard to pack Depth to saturated zone	0.66 0.43	Very limited Slow refill Depth to saturated zone Cutbanks cave	1.00 0.25 0.10
7122C2: Colp-----	Not limited		Somewhat limited Depth to saturated zone	0.43	Very limited Slow refill Depth to saturated zone Cutbanks cave	1.00 0.25 0.10
7131A: Alvin-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
7131B: Alvin-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7131C: Alvin-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.74	Very limited Depth to water	1.00
7131C2: Alvin-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
7131D2: Alvin-----	Very limited Seepage Slope	1.00 0.02	Not limited		Very limited Depth to water	1.00
7338A: Hurst-----	Not limited		Very limited Depth to saturated zone	1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
7338B: Hurst-----	Not limited		Very limited Depth to saturated zone	1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
7401A: Okaw-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.68	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
7460A: Ginat-----	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.20	Very limited Depth to water	1.00
7462A: Sciotoville----	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.95	Very limited Depth to water	1.00
7462B: Sciotoville----	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.95	Very limited Depth to water	1.00
7462C2: Sciotoville----	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.95	Very limited Depth to water	1.00
7462C3: Sciotoville----	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.95	Very limited Depth to water	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7462D2: Sciotoville-----	Very limited Seepage Slope	1.00 0.02	Very limited Piping Depth to saturated zone	1.00 0.95	Very limited Depth to water	1.00
7462D3: Sciotoville-----	Very limited Seepage Slope	1.00 0.02	Very limited Piping Depth to saturated zone	1.00 0.95	Very limited Depth to water	1.00
7463A: Wheeling-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
7463B: Wheeling-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
7463C2: Wheeling-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
7463D3: Wheeling-----	Very limited Seepage Slope	1.00 0.02	Not limited		Very limited Depth to water	1.00
7711A: Hatfield-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.45	Very limited Depth to water	1.00
7711B: Hatfield-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.45	Very limited Depth to water	1.00
8070A: Beaucoup-----	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8071A: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.97	Very limited Slow refill Cutbanks cave	1.00 0.10
8072A: Sharon-----	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Somewhat limited Depth to saturated zone Slow refill Cutbanks cave	0.81 0.28 0.10

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8085A: Jacob-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.97	Very limited Depth to water	1.00
8092B: Sarpy-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.51	Very limited Depth to water	1.00
8108A: Bonnie-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.98	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8109A: Raccoon-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.51	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
8162A: Gorham-----	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Piping Seepage	1.00 1.00 0.56 0.28	Very limited Cutbanks cave	1.00
8175B: Lamont-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.04	Very limited Depth to water	1.00
8178A: Ruark-----	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8180A: Dupo-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Hard to pack	1.00 0.32	Very limited Depth to water	1.00
8184A: Roby-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.01	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
8184B: Roby-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.01	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8284A: Tice-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.20	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8288A: Petrolia-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.13	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
8331A: Haymond-----	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
8333A: Wakeland-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8334A: Birds-----	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.95	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
8382A: Belknap-----	Somewhat limited Seepage	0.54	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.46 0.10
8420A: Piopolis-----	Not limited		Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
8422A: Cape-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.82	Very limited Slow refill Cutbanks cave	1.00 0.10
8422A+: Cape-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.60	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8426A: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.70	Very limited Slow refill Cutbanks cave	1.00 0.10

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part I—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8426A+: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.36	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
8452A: Riley-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Thin layer Seepage	1.00 1.00 0.10	Very limited Cutbanks cave	1.00
8452B: Riley-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Thin layer Seepage	1.00 1.00 0.10	Very limited Cutbanks cave	1.00
8456B: Ware-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
8475B: Elsah-----	Very limited Seepage	1.00	Not limited		Very limited Depth to water	1.00
8589B: Bowdre-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Thin layer Hard to pack	1.00 1.00 0.82	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
8590A: Cairo-----	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Hard to pack Thin layer Seepage	1.00 1.00 1.00 0.86 0.08	Somewhat limited Cutbanks cave	0.10
8597A: Armiesburg-----	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
8682B: Medway-----	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.95	Somewhat limited Cutbanks cave Depth to saturated zone	0.10 0.02
MW: Miscellaneous water-----	Not rated		Not rated		Not rated	
W. Water-----	Not rated		Not rated		Not rated	

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Table 18.—Water Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Not limited	
75C3: Drury-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Not limited	
75D: Drury-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
79B: Menfro-----	Somewhat limited Slope	0.37	Very limited Water erosion Slope	1.00 0.37	Not limited	
79C: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Not limited	
79C2: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Not limited	
79C3: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Not limited	
79D: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
79D2: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
79D3: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
79E: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79E2: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
79E3: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
79F: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
164B: Stoy-----	Somewhat limited Slope	0.37	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 0.37	Very limited Depth to saturated zone	1.00
175A: Lamont-----	Not limited		Somewhat limited Water erosion	0.12	Very limited Expect caving	1.00
175B: Lamont-----	Somewhat limited Slope	0.37	Somewhat limited Slope Water erosion	0.37 0.12	Very limited Expect caving	1.00
175C: Lamont-----	Very limited Slope	1.00	Very limited Slope Water erosion	1.00 0.12	Very limited Expect caving	1.00
214B: Hosmer-----	Somewhat limited Slope	0.37	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 0.37	Somewhat limited Depth to saturated zone	0.99
214C: Hosmer-----	Very limited Slope	1.00	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.99
214C2: Hosmer-----	Very limited Slope	1.00	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.99

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214C3: Hosmer-----	Very limited Slope	1.00	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.99
214D2: Hosmer-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Slope	0.99 0.96
214D3: Hosmer-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Slope	0.99 0.96
216D: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
216D2: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Slope	0.96
216E: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
216E2: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
216E3: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
216F: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
216G: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
471F: Clarksville-----	Very limited Slope Content of large stones	1.00 0.92	Very limited Slope Content of large stones Water erosion	1.00 0.92 0.50	Very limited Slope Expect caving Too clayey	1.00 1.00 0.01
471G: Clarksville-----	Very limited Slope Content of large stones	1.00 0.92	Very limited Slope Content of large stones Water erosion	1.00 0.92 0.50	Very limited Slope Expect caving Too clayey	1.00 1.00 0.01
477B: Winfield-----	Somewhat limited Slope	0.37	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 0.37	Somewhat limited Depth to saturated zone	0.99
477C: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.99
477C2: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.99
477C3: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.99
477D2: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Slope	0.99 0.96
477D3: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Slope	0.99 0.96

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Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
477E3: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Very limited Slope Depth to saturated zone	1.00 0.99
477F: Winfield-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Very limited Slope Depth to saturated zone	1.00 0.99
717F: Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
Clarksville-----	Very limited Slope Content of large stones	1.00 0.92	Very limited Slope Content of large stones Water erosion	1.00 0.92 0.50	Very limited Slope Expect caving Too clayey	1.00 1.00 0.01
717G: Clarksville-----	Very limited Slope Content of large stones	1.00 0.92	Very limited Slope Content of large stones Water erosion	1.00 0.92 0.50	Very limited Slope Expect caving Too clayey	1.00 1.00 0.01
Stookey-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
801B: Orthents-----	Somewhat limited Slope	0.16	Very limited Water erosion Slope	1.00 0.16	Not limited	
802D: Orthents-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Somewhat limited Dense layer Slope	0.50 0.37
832F: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
Clarksville-----	Very limited Slope Content of large stones	1.00 0.92	Very limited Slope Content of large stones Water erosion	1.00 0.92 0.50	Very limited Slope Expect caving Too clayey	1.00 1.00 0.01

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
832G: Clarksville-----	Very limited Slope Content of large stones	1.00 0.92	Very limited Slope Content of large stones Water erosion	1.00 0.92 0.50	Very limited Slope Expect caving Too clayey	1.00 1.00 0.01
Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
833F: Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
Goss-----	Very limited Slope Content of large stones	1.00 1.00	Very limited Slope Content of large stones Water erosion	1.00 1.00 0.50	Very limited Slope Expect caving Too clayey Content of large stones	1.00 1.00 0.95 0.03
833G: Goss-----	Very limited Slope Content of large stones	1.00 1.00	Very limited Slope Content of large stones Water erosion	1.00 1.00 0.50	Very limited Slope Expect caving Too clayey Content of large	1.00 1.00 0.95 0.03
Menfro-----	Very limited Slope	1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
864: Pits, quarries-----	Not rated		Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated		Not rated	
1426A: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 0.95 0.80
1843A: Bonnie-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
Petrolia-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1845A: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.12	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.28
Jacob-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 1.00 0.80
1846A: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 0.95 0.80
Cape-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.02
3070L: Beaucoup-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3071A: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.12	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.28
3071L: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.12	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.28
3092BL: Sarpy-----	Somewhat limited Slope	0.63	Very limited Too sandy Slope	1.00 0.63	Very limited Expect caving Flooding	1.00 0.80

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3108A: Bonnie-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3162L: Gorham-----	Somewhat limited Slope	0.04	Very limited Ponding Depth to saturated zone Water erosion Slope	1.00 1.00 0.50 0.04	Very limited Ponding Depth to saturated zone Expect caving Flooding	1.00 1.00 1.00 0.80
3180L: Dupo-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding Too clayey	1.00 0.80 0.24
3284L: Tice-----	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.88	Very limited Depth to saturated zone Flooding	1.00 0.80
3288L: Petrolia-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3331A: Haymond-----	Somewhat limited Slope	0.04	Very limited Water erosion Slope	1.00 0.04	Somewhat limited Flooding	0.80
3331L: Haymond-----	Somewhat limited Slope	0.04	Very limited Water erosion Slope	1.00 0.04	Somewhat limited Flooding	0.80
3333A: Wakeland-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.80
3333L: Wakeland-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.80

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3334A: Birds-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3334L: Birds-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3382A: Belknap-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.80
3420A: Piopolis-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.80
3422A: Cape-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.02
3422A+: Caoe-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.02
3426L: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 0.95 0.80
3449L: Armiesburg-----	Not limited		Somewhat limited Water erosion	0.88	Somewhat limited Flooding	0.80
Sarpy-----	Not limited		Very limited Too sandy	1.00	Very limited Expect caving Flooding	1.00 0.80

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3452L: Riley-----	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.88	Very limited Depth to saturated zone Expect caving Flooding	1.00 1.00 0.80
3456B: Ware-----	Somewhat limited Slope	0.37	Somewhat limited Water erosion Slope	0.88 0.37	Somewhat limited Flooding	0.80
3456BL: Ware-----	Somewhat limited Slope	0.37	Somewhat limited Water erosion Slope	0.88 0.37	Somewhat limited Flooding	0.80
3590L: Cairo-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.32
3597L: Armiesburg-----	Not limited		Somewhat limited Water erosion	0.88	Somewhat limited Flooding	0.80
3682BL: Medway-----	Somewhat limited Slope	0.37	Very limited Depth to saturated zone Water erosion Slope	1.00 0.88 0.37	Very limited Depth to saturated zone Flooding	1.00 0.80
7084A: Okaw-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.32
7122B: Colp-----	Somewhat limited Slope	0.37	Very limited Water erosion Slope	1.00 0.37	Somewhat limited Depth to saturated zone	0.95
7122C2: Colp-----	Somewhat limited Slope	0.96	Very limited Water erosion Slope	1.00 0.96	Somewhat limited Depth to saturated zone Too clayey	0.95 0.02
7131A: Alvin-----	Not limited		Somewhat limited Water erosion	0.12	Very limited Expect caving	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7131B: Alvin-----	Somewhat limited Slope	0.37	Somewhat limited Slope Water erosion	0.37 0.12	Very limited Expect caving	1.00
7131C: Alvin-----	Very limited Slope	1.00	Very limited Slope Water erosion	1.00 0.12	Very limited Expect caving	1.00
7131C2: Alvin-----	Very limited Slope	1.00	Very limited Slope Water erosion	1.00 0.12	Very limited Expect caving	1.00
7131D2: Alvin-----	Very limited Slope	1.00	Very limited Slope Water erosion	1.00 0.12	Very limited Expect caving Slope	1.00 0.96
7338A: Hurst-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
7338B: Hurst-----	Somewhat limited Slope	0.37	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 0.37	Very limited Depth to saturated zone	1.00
7401A: Okaw-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 0.32
7460A: Ginat-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
7462A: Sciotoville-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
7462B: Sciotoville-----	Somewhat limited		Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 0.37	Very limited Depth to saturated zone	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7462C2: Sciotoville-----	Very limited		Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Depth to saturated zone	1.00
7462C3: Sciotoville-----	Very limited		Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Depth to saturated zone	1.00
7462D2: Sciotoville-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.96
7462D3: Sciotoville-----	Very limited Slope	1.00	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.96
7463A: Wheeling-----	Not limited		Somewhat limited Water erosion	0.88	Very limited Expect caving	1.00
7463B: Wheeling-----	Somewhat limited Slope	0.37	Somewhat limited Water erosion Slope	0.88 0.37	Very limited Expect caving	1.00
7463C2: Wheeling-----	Very limited Slope	1.00	Very limited Slope Water erosion	1.00 0.88	Very limited Expect caving	1.00
7463D3: Wheeling-----	Very limited Slope	1.00	Very limited Slope Water erosion	1.00 0.88	Very limited Expect caving Slope	1.00 0.96
7711A: Hatfield-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
7711B: Hatfield-----	Somewhat limited Slope	0.37	Very limited Water erosion Depth to saturated zone Slope	1.00 1.00 0.37	Very limited Depth to saturated zone	1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8070A: Beaucoup-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8071A: Darwin-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.12	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.60 0.28
8072A: Sharon-----	Somewhat limited Slope	0.04	Very limited Water erosion Slope	1.00 0.04	Somewhat limited Flooding Depth to saturated zone	0.60 0.60
8085A: Jacob-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 1.00 0.60
8092B: Sarpy-----	Somewhat limited Slope	0.63	Very limited Too sandy Slope	1.00 0.63	Very limited Expect caving Flooding	1.00 0.60
8108A: Bonnie-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8109A: Raccoon-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8162A: Gorham-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Expect caving Flooding	1.00 1.00 1.00 0.60
8175B: Lamont-----	Somewhat limited Slope	0.63	Somewhat limited Slope Water erosion	0.63 0.12	Very limited Expect caving Flooding	1.00 0.60

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8178A: Ruark-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8180A: Dupo-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding Too clayey	1.00 0.60 0.24
8184A: Roby-----	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.12	Very limited Depth to saturated zone Expect caving Flooding	1.00 1.00 0.60
8184B: Roby-----	Somewhat limited Slope	0.37	Very limited Depth to saturated zone Slope Water erosion	1.00 0.37 0.12	Very limited Depth to saturated zone Expect caving Flooding	1.00 1.00 0.60
8284A: Tice-----	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.88	Very limited Depth to saturated zone Flooding	1.00 0.60
8288A: Petriola-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8331A: Haymond-----	Somewhat limited Slope	0.04	Very limited Water erosion Slope	1.00 0.04	Somewhat limited Flooding	0.60
8333A: Wakeland-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
8334A: Birds-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8382A: Belknap-----	Not limited		Very limited Water erosion Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
8420A: Piopolis-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60
8422A: Cape-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.02
8422A+: Cape-----	Not limited		Very limited Water erosion Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.80 0.02
8426A: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 0.95 0.60
8426A+: Karnak-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.88	Very limited Ponding Depth to saturated zone Too clayey Flooding	1.00 1.00 0.95 0.60
8452A: Riley-----	Not limited		Very limited Depth to saturated zone Water erosion	1.00 0.88	Very limited Depth to saturated zone Expect caving Flooding	1.00 1.00 0.60
8452B: Riley-----	Somewhat limited Slope	0.37	Very limited Depth to saturated zone Water erosion Slope	1.00 0.88 0.37	Very limited Depth to saturated zone Expect caving Flooding	1.00 1.00 0.60

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part II—Continued

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8456B: Ware-----	Somewhat limited Slope	0.37	Somewhat limited Water erosion Slope	0.88 0.37	Somewhat limited Flooding	0.60
8475B: Elsah-----	Very limited Content of large stones Slope	1.00 0.16	Very limited Water erosion Content of large stones Slope	1.00 1.00 0.16	Very limited Expect caving Flooding	1.00 0.60
8589B: Bowdre-----	Somewhat limited Slope	0.37	Very limited Depth to saturated zone Water erosion Slope	1.00 0.88 0.37	Very limited Depth to saturated zone Flooding	1.00 0.60
8590A: Cairo-----	Not limited		Very limited Ponding Depth to saturated zone Water erosion	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Flooding Too clayey	1.00 1.00 0.60 0.32
8597A: Armiesbirg-----	Not limited		Somewhat limited Water erosion	0.88	Somewhat limited Flooding	0.60
8682B: Medway-----	Somewhat limited Slope	0.37	Very limited Depth to saturated zone Water erosion Slope	1.00 0.88 0.37	Very limited Depth to saturated zone Flooding	1.00 0.80
MW: Miscellaneous water-	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

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Table 18.—Water Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C: Drury-----	Very limited Slope	1.00	Very limited Water erodibility Slope	1.00 0.10	Not limited	
75C3: Drury-----	Very limited Slope	1.00	Very limited Water erodibility Slope	1.00 0.10	Not limited	
75D: Drury-----	Very limited Slope	1.00	Very limited Water erodibility Slope	1.00 0.98	Not limited	
79B: Menfro-----	Somewhat limited Too acid Slope	0.08 0.08	Very limited Water erodibility	1.00	Not limited	
79C: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Water erodibility Slope	1.00 0.10	Not limited	
79C2: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Water erodibility Slope	1.00 0.10	Not limited	
79C3: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Water erodibility Slope	1.00 0.10	Not limited	
79D: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Water erodibility Slope	1.00 0.98	Not limited	
79D2: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Water erodibility Slope	1.00 0.98	Not limited	
79D3: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Water erodibility Slope	1.00 0.98	Not limited	
79E: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	

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Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79E2: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	
79E3: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	
79F: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	
164B: Stoy-----	Very limited Peres slowly Depth to saturated zone Too acid Slope	1.00 0.99 0.22 0.08	Very limited Water erodibility Depth to saturated zone	1.00 0.97	Not limited	
175A: Lamont-----	Somewhat limited Too acid	0.08	Somewhat limited Droughty	0.08	Not limited	
175B: Lamont-----	Somewhat limited Too acid Slope	0.08 0.08	Somewhat limited Droughty	0.08	Not limited	
175C: Lamont-----	Very limited Slope Too acid	1.00 0.08	Somewhat limited Slope Droughty	0.10 0.08	Not limited	
214B: Hosmer-----	Somewhat limited Depth to saturated zone Too acid Fragipan Slope Droughty	0.84 0.78 0.65 0.08 0.01	Very limited Fragipan Water erodibility Droughty	1.00 1.00 0.01	Somewhat limited Fragipan	0.65
214C: Hosmer-----	Very limited Slope Depth to saturated zone Too acid Fragipan	1.00 0.84 0.78 0.65	Very limited Fragipan Water erodibility Slope Droughty	1.00 1.00 0.10 0.01	Somewhat limited Fragipan	0.65

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214C2: Hosmer-----	Very limited Slope Fragipan Depth to saturated zone Too acid Droughty	1.00 0.86 0.84 0.78 0.18	Very limited Fragipan Water erodibility Droughty Slope	1.00 1.00 0.35 0.10	Somewhat limited Fragipan	0.86
214C3: Hosmer-----	Very limited Peres slowly Slope Fragipan Depth to saturated zone Too acid	1.00 1.00 0.86 0.84 0.78	Very limited Fragipan Water erodibility Droughty Slope	1.00 1.00 0.65 0.10	Somewhat limited Fragipan	0.86
214D2: Hosmer-----	Very limited Slope Fragipan Depth to saturated zone Too acid	1.00 0.86 0.84 0.78	Very limited Fragipan Water erodibility Slope Droughty	1.00 1.00 0.98 0.35	Somewhat limited Fragipan	0.86
214D3: Hosmer-----	Very limited Slope Fragipan Depth to saturated zone Too acid	1.00 0.95 0.84 0.78	Very limited Fragipan Water erodibility Slope Droughty	1.00 1.00 0.98 0.75	Somewhat limited Fragipan	0.95
216D: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 0.98	Not limited	
216D2: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 0.98	Not limited	
216E: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 1.00	Not limited	
216E2: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 1.00	Not limited	
216E3: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 1.00	Not limited	

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
216F: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 1.00	Not limited	
216G: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Water erodibility Slope	1.00 1.00	Not limited	
471F: Clarksville-----	Very limited Slope Too acid	1.00 1.00	Very limited Slope Droughty	1.00 0.98	Not limited	
471G: Clarksville-----	Very limited Slope Too acid	1.00 1.00	Very limited Slope Droughty	1.00 0.98	Not limited	
477B: Winfield-----	Somewhat limited Depth to saturated zone Slope	0.68 0.08	Very limited Water erodibility	1.00	Not limited	
477C: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 0.10	Not limited	
477C2: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 0.10	Not limited	
477C3: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 0.10	Not limited	
477D2: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 0.98	Not limited	
477D3: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 0.98	Not limited	

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
477E3: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 1.00	Not limited	
477F: Winfield-----	Very limited Slope Depth to saturated zone	1.00 0.68	Very limited Water erodibility Slope	1.00 1.00	Not limited	
717F: Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Slope Water erodibility	1.00 1.00	Not limited	
Clarksville-----	Very limited Slope Too acid	1.00 1.00	Very limited Slope Droughty	1.00 0.98	Not limited	
717G: Clarksville-----	Very limited Slope Too acid	1.00 1.00	Very limited Slope Droughty	1.00 0.98	Not limited	
Stookey-----	Very limited Slope Too acid	1.00 0.32	Very limited Slope Water erodibility	1.00 1.00	Not limited	
801B: Orthents-----	Somewhat limited Too acid	0.44	Very limited Water erodibility	1.00	Not limited	
802D: Orthents-----	Very limited Slope Peres slowly	1.00 0.31	Very limited Water erodibility Slope	1.00 0.60	Not limited	
832F: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	
Clarksville-----	Very limited Slope Too acid	1.00 1.00	Very limited Slope Droughty	1.00 0.98	Not limited	
832G: Clarksville-----	Very limited Slope Too acid	1.00 1.00	Very limited Slope Droughty	1.00 0.98	Not limited	
Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
833F: Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	
Goss-----	Very limited Slope Too acid Droughty	1.00 0.78 0.01	Very limited Droughty Slope Content of large stones	1.00 1.00 0.50	Not limited	
833G: Goss-----	Very limited Slope Too acid Droughty	1.00 0.78 0.01	Very limited Droughty Slope Content of large stones	1.00 1.00 0.50	Not limited	
Menfro-----	Very limited Slope Too acid	1.00 0.08	Very limited Slope Water erodibility	1.00 1.00	Not limited	
864: Pits, quarries-----	Not rated		Not rated		Not rated	
865: Pits, gravel-----	Not rated		Not rated		Not rated	
1426A: Karnak-----	Very limited Ponding Depth to saturated zone Percs slowly Flooding Too acid	1.00 1.00 1.00 0.80 0.44	Very limited Ponding Flooding Depth to saturated zone Droughty	1.00 1.00 1.00 0.87	Very limited Ponding Flooding Wetness	1.00 1.00 1.00
1843A: Bonnie-----	Very limited Ponding Depth to saturated zone Flooding Too acid Percs slowly	1.00 1.00 0.80 0.32 0.31	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Wetness	1.00 1.00 1.00
Petrolia-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	1.00 1.00 0.80 0.31	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Wetness	1.00 1.00 1.00
1845A: Darwin-----	Very limited Percs slowly Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.80	Very limited Ponding Flooding Depth to saturated zone Droughty	1.00 1.00 1.00 0.32	Very limited Ponding Flooding Wetness	1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1845A: Jacob-----	Very limited		Very limited		Very limited	
	Percs slowly	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Flooding	0.80	Droughty	0.68		
	Too acid	0.44				
1846A: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Flooding	1.00	Flooding	1.00
	saturated zone		Depth to	1.00	Wetness	1.00
	Percs slowly	1.00	saturated zone			
	Flooding	0.80	Droughty	0.87		
	Too acid	0.44				
Cape-----	Very limited		Very limited		Very limited	
	Percs slowly	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Flooding	0.80	Droughty	0.01		
	Too acid	0.32				
3070L: Beaucoup-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Flooding	1.00	Flooding	1.00
	saturated zone		Depth to	1.00	Wetness	1.00
	Flooding	0.80	saturated zone			
3071A: Darwin-----	Very limited		Very limited		Very limited	
	Percs slowly	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Flooding	0.80	Droughty	0.32		
3071L: Darwin-----	Very limited		Very limited		Very limited	
	Percs slowly	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Flooding	0.80	Droughty	0.32		
3092BL: Sarpy-----	Somewhat limited		Very limited		Very limited	
	Flooding	0.80	Flooding	1.00	Flooding	1.00
	Slope	0.32	Wind erosion	1.00		
	Droughty	0.03	Droughty	1.00		

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3108A: Bonnie-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly Too acid	 1.00 1.00 0.80 0.31 0.22	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00 	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3162L: Gorham-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	 1.00 1.00 0.80 0.31	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00 	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3180L: Dupo-----	Very limited Depth to saturated zone Percs slowly Flooding	 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Flooding Wetness	 1.00 1.00
3284L: Tice-----	Very limited Depth to saturated zone Flooding	 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Flooding Wetness	 1.00 1.00
3288L: Petrolia-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	 1.00 1.00 0.80 0.31	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00 	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3331A: Haymond-----	Somewhat limited Flooding	 0.80	Very limited Flooding	 1.00	Very limited Flooding	 1.00
3331L: Haymond-----	Somewhat limited Flooding	 0.80	Very limited Flooding	 1.00	Very limited Flooding	 1.00
3333A: Wakeland-----	Very limited Depth to saturated zone Flooding	 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Flooding Wetness	 1.00 1.00
3333L: Wakeland-----	Very limited Depth to saturated zone Flooding	 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 1.00 	Very limited Flooding Wetness	 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3334A: Birds-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	 1.00 1.00 0.80 0.31	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3334L: Birds-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	 1.00 1.00 0.80 0.31	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3382A: Belknap-----	Very limited Depth to saturated zone Flooding Too acid	 1.00 0.80 0.32	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Wetness	 1.00 1.00
3420A: Piopolis-----	Very limited Ponding Depth to saturated zone Percs slowly Flooding Too acid	 1.00 1.00 1.00 0.80 0.44	Very limited Ponding Flooding Depth to saturated zone Surface percs slowly	 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Wetness Surface percs slowly	 1.00 1.00 1.00 1.00
3422A: Cape-----	Very limited Percs slowly Ponding Depth to saturated zone Flooding Too acid	 1.00 1.00 1.00 0.80 0.32	Very limited Ponding Flooding Depth to saturated zone Droughty	 1.00 1.00 1.00 0.01	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3422A+: Cape-----	Very limited Percs slowly Ponding Depth to saturated zone Flooding Too acid	 1.00 1.00 1.00 0.80 0.32	Very limited Ponding Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00
3426L: Karnak-----	Very limited Ponding Depth to saturated zone Percs slowly Flooding Too acid	 1.00 1.00 1.00 0.80 0.44	Very limited Ponding Flooding Depth to saturated zone Droughty	 1.00 1.00 1.00 0.87	Very limited Ponding Flooding Wetness	 1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3449L: Armiesburg-----	Somewhat limited Flooding	0.80	Very limited Flooding	1.00	Very limited Flooding	1.00
Sarpy-----	Somewhat limited Flooding Droughty	0.80 0.03	Very limited Flooding Wind erosion Droughty	1.00 1.00 1.00	Very limited Flooding	1.00
3452L: Riley-----	Very limited Depth to saturated zone Flooding	1.00 0.80	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Wetness	1.00 1.00
3456B: Ware-----	Somewhat limited Flooding Slope	0.80 0.08	Very limited Flooding	1.00	Very limited Flooding	1.00
3456BL: Ware-----	Somewhat limited Flooding Slope	0.80 0.08	Very limited Flooding	1.00	Very limited Flooding	1.00
3590L: Cairo-----	Very limited Percls slowly Ponding Depth to saturated zone Droughty Flooding	1.00 1.00 1.00 0.93 0.80	Very limited Ponding Flooding Depth to saturated zone Droughty	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Wetness	1.00 1.00 1.00
3597L: Armiesburg-----	Somewhat limited Flooding	0.80	Very limited Flooding	1.00	Very limited Flooding	1.00
3682BL: Medway-----	Somewhat limited Depth to saturated zone Flooding Slope	0.95 0.80 0.08	Very limited Flooding	1.00	Very limited Flooding	1.00
7084A: Okaw-----	Very limited Percls slowly Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.32	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Wetness	1.00 1.00
7122B: Colp-----	Very limited Percls slowly Depth to saturated zone Too acid Slope	1.00 0.44 0.08 0.08	Very limited Water erodibility	1.00	Not limited	

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Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7122C2: Colp-----	Very limited Peres slowly Slope Depth to saturated zone	1.00 0.92 0.44	Very limited Water erodibility Slope	1.00 0.02	Not limited	
7131A: Alvin-----	Somewhat limited Too acid	0.32	Not limited		Not limited	
7131B: Alvin-----	Somewhat limited Too acid Slope	0.32 0.08	Not limited		Not limited	
7131C: Alvin-----	Very limited Slope Too acid	1.00 0.32	Somewhat limited Slope	0.10	Not limited	
7131C2: Alvin-----	Very limited Slope Too acid	1.00 0.32	Somewhat limited Slope	0.10	Not limited	
7131D2: Alvin-----	Very limited Slope Too acid	1.00 0.32	Somewhat limited Slope	0.98	Not limited	
7338A: Hurst-----	Very limited Peres slowly Depth to saturated zone Too acid	1.00 1.00 0.08	Very limited Depth to saturated zone	1.00	Not limited	
7338B: Hurst-----	Very limited Peres slowly Depth to saturated zone Too acid Slope	1.00 1.00 0.08 0.08	Very limited Depth to saturated zone Water erodibility	1.00 1.00	Not limited	
7401A: Okaw-----	Very limited Peres slowly Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.32	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Wetness	1.00 1.00
7460A: Ginat-----	Very limited Peres slowly Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.32	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Wetness	1.00 1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7462A: Sciotoville-----	Somewhat limited Depth to saturated zone Percs slowly Too acid	0.95 0.61 0.44	Not limited		Not limited	
7462B: Sciotoville-----	Somewhat limited Depth to saturated zone Percs slowly Too acid Slope	0.95 0.61 0.44 0.08	Very limited Water erodibility	1.00	Not limited	
7462C2: Sciotoville-----	Very limited Slope Depth to saturated zone Percs slowly Too acid	1.00 0.95 0.61 0.44	Very limited Water erodibility Slope	1.00 0.10	Not limited	
7462C3: Sciotoville-----	Very limited Slope Depth to saturated zone Percs slowly Too acid	1.00 0.95 0.61 0.44	Very limited Water erodibility Slope	1.00 0.10	Not limited	
7462D2: Sciotoville-----	Very limited Slope Depth to saturated zone Percs slowly Too acid	1.00 0.95 0.61 0.44	Very limited Water erodibility Slope	1.00 0.98	Not limited	
7462D3: Sciotoville-----	Very limited Slope Depth to saturated zone Percs slowly Too acid	1.00 0.95 0.61 0.44	Very limited Water erodibility Slope	1.00 0.98	Not limited	
7463A: Wheeling-----	Somewhat limited Too acid	0.44	Somewhat limited Droughty	0.41	Not limited	
7463B: Wheeling-----	Somewhat limited Too acid Slope	0.44 0.08	Very limited Water erodibility Droughty	1.00 0.41	Not limited	

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7463C2: Wheeling-----	Very limited Slope Too acid	1.00 0.44	Very limited Water erodibility Droughty Slope	1.00 0.48 0.10	Not limited	
7463D3: Wheeling-----	Very limited Slope Too acid	1.00 0.44	Very limited Water erodibility Slope Droughty	1.00 0.98 0.54	Not limited	
7711A: Hatfield-----	Very limited Percs slowly Depth to saturated zone Too acid	1.00 1.00 0.32	Very limited Depth to saturated zone	1.00	Very limited Wetness	1.00
7711B: Hatfield-----	Very limited Percs slowly Depth to saturated zone Too acid Slope	1.00 1.00 0.32 0.08	Very limited Depth to saturated zone Water erodibility	1.00 1.00	Very limited Wetness	1.00
8070A: Beaucoup-----	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Wetness	1.00 1.00
8071A: Darwin-----	Very limited Percs slowly Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.60	Very limited Ponding Depth to saturated zone Droughty	1.00 1.00 0.32	Very limited Ponding Wetness	1.00 1.00
8072A: Sharon-----	Somewhat limited Too acid Flooding	0.78 0.60	Not limited		Not limited	
8085A: Jacob-----	Very limited Percs slowly Ponding Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.60 0.44	Very limited Ponding Depth to saturated zone Droughty	1.00 1.00 0.68	Very limited Ponding Wetness	1.00 1.00

Soil Survey of Alexander County, Illinois

Table 18.--Water Management, Part III--Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8092B: Sarpy-----	Somewhat limited Flooding Slope Droughty	 0.60 0.32 0.03	Very limited Wind erosion Droughty	 1.00 1.00	Not limited	
8108A: Bonnie-----	Very limited Ponding Depth to saturated zone Flooding Too acid Peres slowly	 1.00 1.00 0.60 0.32 0.31	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Wetness	 1.00 1.00
8109A: Raccoon-----	Very limited Ponding Depth to saturated zone Peres slowly Flooding Too acid	 1.00 1.00 1.00 0.60 0.22	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Wetness	 1.00 1.00
8162A: Gorham-----	Very limited Ponding Depth to saturated zone Flooding Peres slowly	 1.00 1.00 0.60 0.31	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Wetness	 1.00 1.00
8175B: Lamont-----	Somewhat limited Flooding Slope Too acid	 0.60 0.32 0.08	Not limited		Not limited	
8178A: Ruark-----	Very limited Ponding Depth to saturated zone Flooding Too acid Peres slowly	 1.00 1.00 0.60 0.32 0.31	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Wetness	 1.00 1.00
8180A: Dupo-----	Very limited Depth to saturated zone Peres slowly Flooding	 1.00 1.00 0.60	Very limited Depth to saturated zone	 1.00	Very limited Wetness	 1.00
8184A: Roby-----	Somewhat limited Depth to saturated zone Flooding	 0.99 0.60	Somewhat limited Depth to saturated zone Droughty	 0.97 0.01	Not limited	

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Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8184B: Roby-----	Somewhat limited Depth to saturated zone Flooding Slope	0.99 0.60 0.08	Somewhat limited Depth to saturated zone Droughty	0.97 0.01	Not limited	
8284A: Tice-----	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Depth to saturated zone	1.00	Very limited Wetness	1.00
8288A: Petrolia-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	1.00 1.00 0.60 0.31	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Wetness	1.00 1.00
8331A: Haymond-----	Somewhat limited Flooding	0.60	Not limited		Not limited	
8333A: Wakeland-----	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Depth to saturated zone	1.00	Very limited Wetness	1.00
8334A: Birds-----	Very limited Ponding Depth to saturated zone Flooding Percs slowly	1.00 1.00 0.60 0.31	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Wetness	1.00 1.00
8382A: Belknap-----	Very limited Depth to saturated zone Flooding Too acid	1.00 0.60 0.32	Very limited Depth to saturated zone	1.00	Very limited Wetness	1.00
8420A: Piopolis-----	Very limited Ponding Depth to saturated zone Percs slowly Flooding Too acid	1.00 1.00 1.00 0.60 0.44	Very limited Ponding Depth to saturated zone Surface percs slowly	1.00 1.00 1.00	Very limited Ponding Wetness Surface percs slowly	1.00 1.00 1.00

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8422A: Cape-----	Very limited		Very limited		Very limited	
	Percs slowly	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Flooding	0.80	Droughty	0.01		
	Too acid	0.32				
8422A+: Cape-----	Very limited		Very limited		Very limited	
	Percs slowly	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Flooding	0.80				
	Too acid	0.32				
8426A: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Percs slowly	1.00	Droughty	0.87		
	Flooding	0.60				
	Too acid	0.44				
8426A+: Karnak-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Wetness	1.00
	saturated zone		saturated zone			
	Percs slowly	1.00				
	Flooding	0.60				
8452A: Riley-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Droughty	1.00	Wetness	1.00
	saturated zone		Depth to	1.00		
	Droughty	1.00	saturated zone			
	Flooding	0.60				
8452B: Riley-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Droughty	1.00	Wetness	1.00
	saturated zone		Depth to	1.00		
	Droughty	1.00	saturated zone			
	Flooding	0.60				
	Slope	0.08				
8456B: Ware-----	Somewhat limited		Not limited		Not limited	
	Flooding	0.60				
	Slope	0.08				
8475B: Elsah-----	Somewhat limited		Very limited		Not limited	
	Flooding	0.60	Water erodibility	1.00		
			Droughty	0.07		

Soil Survey of Alexander County, Illinois

Table 18.—Water Management, Part III—Continued

Map symbol and soil name	Irrigation with all application methods		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8589B: Bowdre-----	Very limited Depth to saturated zone Droughty Percs slowly Flooding Slope	1.00 1.00 1.00 0.60 0.08	Very limited Droughty Depth to saturated zone	1.00 1.00	Very limited Wetness	1.00
8590A: Cairo-----	Very limited Percs slowly Ponding Depth to saturated zone Droughty Flooding	1.00 1.00 1.00 0.93 0.60	Very limited Ponding Depth to saturated zone Droughty	1.00 1.00 1.00	Very limited Ponding Wetness	1.00 1.00
8597A: Armiesburg-----	Somewhat limited Flooding	0.60	Not limited		Not limited	
8682B: Medway-----	Somewhat limited Depth to saturated zone Flooding Slope	0.95 0.80 0.08	Very limited Flooding	1.00	Very limited Flooding	1.00
MW: Miscellaneous water-	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 19.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
75C: Drury-----	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	95-100	90-100	20-35	NP-15
	6-33	Silt loam	CL	A-4, A-6	0	0	100	95-100	95-100	90-100	25-35	8-15
	33-80	Silt loam, loam, very fine sandy loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	95-100	55-95	20-30	5-15
75C3: Drury-----	0-1	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	95-100	90-100	20-35	NP-15
	1-28	Silt loam	CL	A-4, A-6	0	0	100	95-100	95-100	90-100	25-35	8-15
	28-80	Silt loam, loam, very fine sandy loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	95-100	55-95	20-30	5-15
75D: Drury-----	0-6	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	95-100	95-100	90-100	20-35	NP-15
	6-33	Silt loam	CL	A-4, A-6	0	0	100	95-100	95-100	90-100	25-35	8-15
	33-80	Silt loam, loam, very fine sandy loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	95-100	55-95	20-30	5-15
79B: Menfro-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
79C: Menfro-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches		4	10	40	200		
						Pct	Pct						
79C2: Menfro-----	In											Pct	
	0-7	Silt loam	CL	A-6	0	0	0	100	100	95-100	90-100	25-35	11-20
	7-59	Silty clay loam, silt loam	CL	A-6, A-7	0	0	0	100	100	95-100	95-100	35-45	20-25
	59-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	0	100	100	95-100	90-100	25-35	5-15
79C3: Menfro-----	0-5	Silt loam, silty clay loam	CL	A-6	0	0	0	100	100	95-100	90-100	25-35	11-20
	5-57	Silty clay loam, silt loam	CL	A-6, A-7	0	0	0	100	100	95-100	95-100	35-45	20-25
	57-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	0	100	100	95-100	90-100	25-35	5-15
79D: Menfro-----	0-10	Silt loam	CL	A-6	0	0	0	100	100	95-100	90-100	25-35	11-20
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	0	100	100	95-100	95-100	35-45	20-25
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	0	100	100	95-100	90-100	25-35	5-15
79D2: Menfro-----	0-7	Silt loam	CL	A-6	0	0	0	100	100	95-100	90-100	25-35	11-20
	7-59	Silty clay loam, silt loam	CL	A-6, A-7	0	0	0	100	100	95-100	95-100	35-45	20-25
	59-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	0	100	100	95-100	90-100	25-35	5-15
79D3: Menfro-----	0-5	Silt loam, silty clay loam	CL	A-6	0	0	0	100	100	95-100	90-100	25-35	11-20
	5-57	Silty clay loam, silt loam	CL	A-6, A-7	0	0	0	100	100	95-100	95-100	35-45	20-25
	57-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	0	100	100	95-100	90-100	25-35	5-15

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
79E: Menfro-----	In											Pct	
	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20	
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25	
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15	
79E2: Menfro-----	0-7	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20	
	7-59	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25	
	59-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15	
79E3: Menfro-----	0-5	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20	
	5-57	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25	
	57-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15	
79F: Menfro-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20	
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25	
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15	
164B: Stoy-----	0-13	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	90-100	30-40	10-15	
	13-32	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-100	40-50	22-32	
	32-45	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	15-25	
	45-80	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-45	13-25	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches		4	10	40	200		
						Pct	Pct						
175A: Lamont-----	In											Pct	
	0-11	Fine sandy loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	80-95	25-50	15-25	5-10
	11-17	Fine sandy loam, loamy fine sand, sandy loam	SC-SM, SM	A-2, A-4	0	0	0	100	100	80-95	15-50	15-25	NP-5
	17-27	Fine sandy loam, loam, sandy clay loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	85-95	30-50	20-30	5-10
	27-80	Loamy fine sand, loamy sand, sand	SM	A-2, A-3	0	0	0	100	100	70-90	5-25	0-14	NP
175B: Lamont-----	0-11	Fine sandy loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	80-95	25-50	15-25	5-10
	11-17	Fine sandy loam, loamy fine sand, sandy loam	SC-SM, SM	A-2, A-4	0	0	0	100	100	80-95	15-50	15-25	NP-5
	17-27	Fine sandy loam, loam, sandy clay loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	85-95	30-50	20-30	5-10
	27-80	Loamy fine sand, loamy sand, sand	SM	A-2, A-3	0	0	0	100	100	70-90	5-25	0-14	NP
175C: Lamont-----	0-11	Fine sandy loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	80-95	25-50	15-25	5-10
	11-17	Fine sandy loam, loamy fine sand, sandy loam	SC-SM, SM	A-2, A-4	0	0	0	100	100	80-95	15-50	15-25	NP-5
	17-27	Fine sandy loam, loam, sandy clay loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	85-95	30-50	20-30	5-10
	27-80	Loamy fine sand, loamy sand, sand	SM	A-2, A-3	0	0	0	100	100	70-90	5-25	0-14	NP

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
214B: Hosmer-----	0-7	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	15-25	3-10
	7-28	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	25-35	5-15
	28-67	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	20-30	5-15
	67-80	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-95	15-25	3-10
214C: Hosmer-----	0-7	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	15-25	3-10
	7-28	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	25-35	5-15
	28-67	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	20-30	5-15
	67-80	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-95	15-25	3-10
214C2: Hosmer-----	0-4	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	15-25	3-10
	4-25	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	25-35	5-15
	25-64	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	20-30	5-15
	64-80	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-95	15-25	3-10
214C3: Hosmer-----	0-2	Silty clay loam, silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	15-25	3-10
	2-23	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	25-35	5-15
	23-62	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	20-30	5-15
	62-80	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-95	15-25	3-10

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
214D2: Hosmer-----	0-4	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	15-25	3-10
	4-25	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	25-35	5-15
	25-64	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	20-30	5-15
	64-80	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-95	15-25	3-10
214D3: Hosmer-----	0-2	Silt loam, silty clay loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	15-25	3-10
	2-23	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	25-35	5-15
	23-62	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	70-95	20-30	5-15
	62-80	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-95	15-25	3-10
216D: Stookey-----	0-6	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	6-62	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	62-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216D2: Stookey-----	0-3	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	3-59	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	59-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216E: Stookey-----	0-6	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	6-62	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	62-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216E2: Stookey-----	0-3	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	3-59	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	59-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216E3: Stookey-----	0-1	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	1-57	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	57-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
216F: Stookey-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
	0-6	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	6-62	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
216G: Stookey-----	62-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	0-6	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	6-62	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
471F: Clarksville----	62-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	0-16	Gravelly silt loam, gravelly silt, very gravelly silt loam	GC, GC-GM, SC, SC-SM	A-4, A-6	0-10	5-20	65-95	60-85	55-80	40-50	20-35	5-15
	16-26	Very gravelly silt loam, very gravelly silty clay loam, very gravelly silty clay, extremely gravelly silty clay loam	GC, SC, SP-SC	A-2-6, A-6	0-10	5-20	30-70	10-60	10-50	5-45	30-40	15-25
	26-80	Very gravelly silty clay, very gravelly clay, extremely gravelly silty clay	GC, SC	A-2-7, A-7	0-20	5-20	30-70	20-60	10-50	10-45	55-75	35-55

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number---				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
471G: Clarksville-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
	0-16	Gravelly silt loam, gravelly silt, very gravelly silt loam	GC, GC-GM, SC, SC-SM	A-4, A-6	0-10	5-20	65-95	60-85	55-80	40-50	20-35	5-15
	16-26	Very gravelly silt loam, very gravelly silty clay loam, very gravelly silty clay, extremely gravelly silty clay loam	GC, SC, SP-SC	A-2-6, A-6	0-10	5-20	30-70	10-60	10-50	5-45	30-40	15-25
	26-80	Very gravelly silty clay, very gravelly clay, extremely gravelly silty clay	GC, SC	A-2-7, A-7	0-20	5-20	30-70	20-60	10-50	10-45	55-75	35-55
477B: Winfield-----	0-9	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	9-13	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25
	13-56 56-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15
477C: Winfield-----	0-9	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	9-13	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25
	13-56 56-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15
477C2: Winfield-----	0-6	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	6-10	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25
	10-53 53-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
477C3: Winfield-----	In											Pct	
	0-4	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25	
	4-8	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25	
	8-51 51-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	90-100 90-100	35-45 25-35	20-25 5-15	
477D2: Winfield-----	0-6 6-10	Silt loam Silty clay loam, silt loam	CL CL	A-6 A-6, A-7	0 0	0 0	100 100	100 100	95-100 95-100	90-100 90-100	25-40 35-45	10-25 15-25	
	10-53 53-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15	
	0-4	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25	
	4-8	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25	
477E3: Winfield-----	8-51 51-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15	
	0-4	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25	
	4-8	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25	
	8-51 51-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15	
477F: Winfield-----	0-9 9-13	Silt loam Silty clay loam, silt loam	CL CL	A-6 A-6, A-7	0 0	0 0	100 100	100 100	95-100 95-100	90-100 90-100	25-40 35-45	10-25 15-25	
	13-56 56-80	Silty clay loam Silt loam	CL CL, CL-ML	A-6, A-7 A-4, A-6	0 0	0 0	100 100	100 100	95-100 95-100	95-100 90-100	35-45 25-35	20-25 5-15	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
717F: Stookey-----	0-6	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	6-62	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	62-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
Clarksville----	0-16	Gravelly silt loam, gravelly silt, very gravelly silt loam	GC, GC-GM, SC, SC-SM	A-4, A-6	0-10	5-20	65-95	60-85	55-80	40-50	20-35	5-15
	16-26	Very gravelly silt loam, very gravelly silty clay loam, very gravelly silty clay, extremely gravelly silty clay loam	GC, SC, SP-SC	A-2-6, A-6	0-10	5-20	30-70	10-60	10-50	5-45	30-40	15-25
	26-80	Very gravelly silty clay, very gravelly clay, extremely gravelly silty clay	GC, SC	A-2-7, A-7	0-20	5-20	30-70	20-60	10-50	10-45	55-75	35-55

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--					Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
717G: Clarksville-----	<u>In</u>											<u>Pct</u>	
	0-16	Gravelly silt loam, gravelly silt, very gravelly silt loam	GC, GC-GM, SC, SC-SM	A-4, A-6	0-10	5-20	65-95	60-85	55-80	40-50	20-35		5-15
	16-26	Very gravelly silt loam, very gravelly silty clay loam, very gravelly silty clay, extremely gravelly silty clay loam	GC, SC, SP-SC	A-2-6, A-6	0-10	5-20	30-70	10-60	10-50	5-45	30-40		15-25
	26-80	Very gravelly silty clay, very gravelly clay, extremely gravelly silty clay	GC, SC	A-2-7, A-7	0-20	5-20	30-70	20-60	10-50	10-45	55-75		35-55
Stookey-----	0-6	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30		5-15
	6-62	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40		10-15
	62-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30		5-15
801B: Orthents-----	0-80	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4, A-7	0	0	100	100	90-100	80-95	25-45		5-25
802D: Orthents-----	0-6	Loam, silt loam, clay loam	CL	A-6	0	0-5	95-100	90-100	85-95	60-90	20-40		10-20
	6-80	Loam, silt loam, very fine sandy loam	CL	A-6	0	0-5	95-100	90-100	85-95	60-90	20-40		10-20

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
832F: Menfro-----	In				Pct	Pct					Pct		
	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20	
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25	
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15	
Clarksville----	0-16	Gravelly silt loam, gravelly silt, very gravelly silt loam	GC, GC-GM, SC, SC-SM	A-4, A-6	0-10	5-20	65-95	60-85	55-80	40-50	20-35	5-15	
	16-26	Very gravelly silt loam, very gravelly silty clay loam, very gravelly silty clay, extremely gravelly silty clay loam	GC, SC, SP-SC	A-2-6, A-6	0-10	5-20	30-70	10-60	10-50	5-45	30-40	15-25	
	26-80	Very gravelly silty clay, very gravelly clay, extremely gravelly silty clay	GC, SC	A-2-7, A-7	0-20	5-20	30-70	20-60	10-50	10-45	55-75	35-55	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
832G: Clarksville-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
	0-16	Gravelly silt loam, gravelly silt, very gravelly silt loam	GC, GC-GM, SC, SC-SM	A-4, A-6	0-10	5-20	65-95	60-85	55-80	40-50	20-35	5-15
	16-26	Very gravelly silt loam, very gravelly silty clay loam, very gravelly silty clay, extremely gravelly silty clay loam	GC, SC, SP-SC	A-2-6, A-6	0-10	5-20	30-70	10-60	10-50	5-45	30-40	15-25
	26-80	Very gravelly silty clay, very gravelly clay, extremely gravelly silty clay loam	GC, SC	A-2-7, A-7	0-20	5-20	30-70	20-60	10-50	10-45	55-75	35-55
Menfro-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20
	10-62	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
833F: Menfro-----	0-10	Silt loam	CL	A-4	0	0	100	100	90-100	70-100	20-30	5-15
	10-62	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90-100	80-100	30-40	10-20
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4	0	0	100	100	90-100	70-100	15-25	NP-10

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--					Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
833F: Goss-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>		
	0-7	Gravelly silt loam	CL, CL-ML, ML	A-4	0	0-10	65-85	65-75	65-75	65-75	20-30	2-10	
	7-22	Very gravelly clay loam, very gravelly silt loam, gravelly silty clay loam	GC, GC-GM, GM	A-2	0-5	5-40	40-60	35-55	30-50	25-35	20-30	2-10	
	22-80	Very cobbly clay, extremely cobbly clay, gravelly silty clay, very cobbly silty clay	GC, SC	A-2-7, A-7	0-5	5-45	45-70	20-65	20-50	20-45	50-70	30-40	
833G: Goss-----	0-7	Gravelly silt loam	CL, CL-ML, ML	A-4	0	0-10	65-85	65-75	65-75	65-75	20-30	2-10	
	7-22	Very gravelly clay loam, very gravelly silt loam, gravelly silty clay loam	GC, GC-GM, GM	A-2	0-5	5-40	40-60	35-55	30-50	25-35	20-30	2-10	
	22-80	Very cobbly clay, extremely cobbly clay, gravelly silty clay, very cobbly silty clay	GC, SC	A-2-7, A-7	0-5	5-45	45-70	20-65	20-50	20-45	50-70	30-40	
Menfro-----	0-10 10-62	Silt loam Silty clay loam, silt loam	CL CL	A-6 A-6	0 0	0 0	100 100	100 100	90-100 90-100	70-100 80-100	20-30 30-40	5-15 10-20	
	62-80	Silt loam, silty clay loam	CL, CL-ML	A-4	0	0	100	100	90-100	70-100	15-25	NP-10	
864. Pits, quarries													

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
865. Pits, gravel	In										Pct	
1426A: Karnak-----	0-5	Silty clay	CH, CL	A-7	0	0	100	100	95-100	95-100	45-80	25-45
	5-50	Silty clay, clay	CH, CL, MH, ML	A-7	0	0	100	100	95-100	95-100	45-80	20-40
	50-80	Silty clay, silty clay loam	CH, CL	A-7	0	0	100	100	95-100	85-100	45-80	25-45
1843A: Bonnie-----	0-10	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	27-34	8-12
	10-27	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	27-34	8-12
	27-80	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	100	90-100	85-100	25-39	8-15
Petrolia-----	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	80-100	35-45	15-22
	8-55	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	85-100	35-45	15-22
	55-80	Silty clay loam, silt loam	CL	A-6, A-7, A-4	0	0	100	95-100	80-100	60-100	20-45	8-22
1845A: Darwin-----	0-14	Silty clay	CH, CL	A-7	0	0	100	100	100	90-100	45-85	25-55
	14-56	Silty clay, clay	CH, CL	A-7	0	0	100	100	100	85-100	45-85	25-55
	56-80	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	100	95-100	90-100	35-70	20-45
Jacob-----	0-4	Silty clay, clay	CH, MH	A-7	0	0	100	100	100	95-100	60-85	33-45
	4-50	Clay, silty clay	MH	A-7	0	0	100	100	100	95-100	65-85	30-45
	50-80	Clay, silty clay	MH	A-7	0	0	100	100	100	95-100	60-85	33-45
1846A: Karnak-----	0-5	Silty clay	CH, CL	A-7	0	0	100	100	95-100	95-100	45-80	25-45
	5-50	Silty clay, clay	CH, CL, MH, ML	A-7	0	0	100	100	95-100	95-100	45-80	20-40
	50-80	Silty clay, silty clay loam	CH, CL	A-7	0	0	100	100	95-100	85-100	45-80	25-45

Table 19.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
1846A: Cape-----	0-10	Silty clay loam	CL	A-7, A-6	0	0	0	100	100	95-100	35-50	20-30
	10-22	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	0	100	100	95-100	35-50	20-30
	22-80	Silty clay, clay, silty clay loam	CH	A-7	0	0	0	100	100	90-100	39-70	30-45
3070L: Beaucoup-----	0-16	Silty clay loam	CL	A-6, A-7	0	0	0	100	100	90-100	30-45	15-25
	16-46	Silty clay loam	CL	A-6, A-7	0	0	0	100	100	90-100	30-45	15-30
	46-80	Stratified very fine sandy loam to silty clay loam	CL, CL-ML	A-6, A-4	0	0	0	100	100	90-100	20-40	5-20
3071A: Darwin-----	0-14	Silty clay	CH, CL	A-7	0	0	0	100	100	90-100	45-85	25-55
	14-56	Silty clay, clay	CH, CL	A-7	0	0	0	100	100	85-100	45-85	25-55
	56-80	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	0	100	100	95-100	35-70	20-45
3071L: Darwin-----	0-14	Silty clay	CH, CL	A-7	0	0	0	100	100	90-100	45-85	25-55
	14-56	Silty clay, clay	CH, CL	A-7	0	0	0	100	100	85-100	45-85	25-55
	56-80	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	0	100	100	90-100	35-70	20-45
3092BL: Sarpy-----	0-9	Fine sand, loamy fine sand, sandy loam, loamy sand, sand	SM	A-2-4	0	0	0	100	100	60-80	15-35	NP
	9-80	Stratified sand, stratified fine sand, stratified loamy fine sand, stratified loamy sand	SM, SP, SP-SM	A-2-4, A-3	0	0	0	100	100	60-80	2-35	NP

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
3108A: Bonnie-----	In											Pct	
	0-10	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	27-34	8-12	
	10-27	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	27-34	8-12	
	27-80	Silt loam, silty clay loam	CL	A-6, A-4	0	0	100	100	90-100	85-100	25-39	8-15	
3162L: Gorham-----	0-14	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	70-90	35-50	15-25	
	14-36	Silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	100	90-95	40-55	15-30	
	36-54	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0	100	80-90	70-80	50-80	30-45	10-20	
	54-80	Sand, loamy sand, sandy loam, fine sandy loam, fine sand	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	100	75-90	55-80	10-50	15-30	NP-10	
3180L: Dupo-----	0-9	Silt loam	CL, CL-ML	A-4	0	0	100	100	100	95-100	20-30	5-10	
	9-25	Silt loam	CL, CL-ML	A-4	0	0	100	100	100	95-100	20-30	5-10	
	25-80	Silty clay, clay, silty clay loam	CH	A-7-6	0	0	100	100	100	98-100	50-70	30-45	
3284L: Tice-----	0-16	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	30-45	10-20	
	16-72	Silty clay loam, silt loam	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	15-30	
	72-80	Stratified loam to silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	60-95	55-80	25-45	5-20	
3288L: Petrolia-----	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	80-100	35-45	15-22	
	8-55	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	85-100	35-45	15-22	
	55-80	Silty clay loam, silt loam	CL	A-6, A-7, A-4	0	0	100	95-100	80-100	60-100	20-45	8-22	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
3331A: Haymond-----	In											
	0-20	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	85-100	20-30	3-10
	20-60	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-10
	60-80	Fine sandy loam, silt loam, loam	ML, SC, SM	A-4	0	0	95-100	90-100	65-100	35-90	15-35	2-15
3331L: Haymond-----	0-20	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	85-100	20-30	3-10
	20-60	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-10
	60-80	Fine sandy loam, loam, silt loam	ML, SC, SM	A-4, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15
3333A: Wakeland-----	0-8	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	8-68	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	68-80	Silt loam, loam	ML, CL-ML	A-4	0	0	100	100	85-100	60-100	16-28	3-9
3333L: Wakeland-----	0-8	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	8-68	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	68-80	Silt loam, loam	ML, CL, CL-ML	A-4	0	0	100	100	85-100	60-100	16-28	3-9
3334A: Birds-----	0-22	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-100	24-34	8-15
	22-80	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-100	24-34	8-15
3334L: Birds-----	0-22	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-100	24-34	8-15
	22-80	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-100	24-34	8-15
3382A: Belknap-----	0-7	Silt loam	CL-ML, ML, CL	A-4	0	0	100	95-100	95-100	80-100	20-30	2-8
	7-59	Silt loam	CL-ML, ML, CL	A-4, A-6	0	0	100	95-100	95-100	80-100	20-35	NP-12
	59-80	Silt loam, silty clay loam	CL, CL-ML, ML	A-6, A-4	0	0	100	95-100	95-100	75-100	20-40	3-20
3420A: Piopolis-----	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	35-50	15-25
	7-37	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-95	35-50	15-25
	37-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--					Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches		4	10	40	200		
						Pct	Pct						
3422A: Cape-----	<u>In</u>											<u>Pct</u>	
	0-10	Silty clay loam	CL	A-7, A-6	0	0	100	100	100	100	95-100	35-50	20-30
	10-22	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	100	100	100	95-100	35-50	20-30
	22-80	Silty clay, clay, silty clay loam	CH	A-7	0	0	100	100	100	100	90-100	39-70	30-45
3422A+: Cape-----	0-16	Silt loam	CL	A-4, A-6	0	0	100	100	100	90-100	70-90	27-34	8-12
	16-22	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	100	100	100	95-100	35-50	20-30
	22-80	Silty clay, clay, silty clay loam	CH	A-7	0	0	100	100	100	100	90-100	39-70	30-45
3426L: Karnak-----	0-5	Silty clay, silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	95-100	45-80	25-45
	5-50	Silty clay, clay	CH	A-7	0	0	100	100	100	95-100	95-100	45-80	20-40
	50-80	Silty clay, silty clay loam	CH, CL	A-7	0	0	100	100	100	95-100	85-100	45-80	25-45
3449L: Armiesburg-----	0-15	Silty clay loam	CL, CH	A-7, A-6	0	0	100	100	100	95-100	85-100	35-55	20-35
	15-67	Silty clay loam	CL, CH	A-7, A-6	0	0	100	100	100	95-100	85-100	35-55	20-35
	67-80	Silt loam, silty clay loam	CL, CH	A-7, A-6	0	0	100	100	100	90-100	75-100	35-55	20-35

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number---				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
3449L: Sarpy-----	0-9	Fine sand, loamy fine sand, sandy loam, loamy sand, sand	SM	A-2-4	0	0	100	100	60-80	15-35	0-14	NP
	9-80	Stratified sand, stratified fine sand, stratified loamy fine sand, stratified loamy sand	SM, SP, SP-SM	A-2-4, A-3	0	0	100	100	60-80	2-35	0-14	NP
3452L: Riley-----	0-13	Silty clay loam, clay loam, silt loam, loam	CL	A-6	0	0	100	100	95-100	80-100	30-40	15-25
	13-27	Clay loam, loam, sandy clay loam, silt loam, silty clay loam	CL, SC	A-7-6, A-6, A-7	0	0	100	100	90-100	40-85	35-50	15-25
	27-80	Loamy sand, sand, loamy fine sand, stratified fine sandy loam to silty clay loam	SM, SC-SM, SP-SM	A-2-4, A-2, A-4	0	0	100	100	90-100	10-40	0-0	NP

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--					Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
3456B: Ware-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>		
	0-14	Stratified very fine sandy loam to loamy fine sand, very fine sandy loam, loamy fine sand	SC-SM, SM	A-4	0	0	100	100	95-100	35-50	15-25	NP-5	
	14-21	Very fine sandy loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	95-100	50-70	20-30	2-10	
	21-80	Very fine sandy loam, loamy fine sand, stratified very fine sandy loam to loamy fine sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	10-60	15-25	NP-6	
3456BL: Ware-----	0-14	Very fine sandy loam, loamy fine sand, stratified very fine sandy loam to loamy fine sand	SC-SM, SM	A-4	0	0	100	100	95-100	35-50	15-25	NP-5	
	14-21	Very fine sandy loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	95-100	50-70	20-30	2-10	
	21-80	Very fine sandy loam, loamy fine sand, stratified very fine sandy loam to loamy fine sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	10-60	15-25	NP-6	
3590L: Cairo-----	0-17	Silty clay	CH	A-7-6, A-7	0	0	100	100	95-100	90-100	51-80	31-55	
	17-30	Silty clay, clay	CH	A-7-6, A-7	0	0	100	100	90-100	75-100	51-80	31-55	
	30-80	Sandy loam, loamy fine sand, fine sand	SC, SC-SM, SM	A-2-4, A-2, A-4	0	0	100	65-100	50-80	15-45	15-30	NP-10	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200	Pct		
	<u>In</u>				Pct	Pct					Pct		
3597L: Armiesburg-----	0-15	Silty clay loam	CL, CH	A-7, A-6	0	0	100	100	95-100	85-100	35-55	20-35	
	15-67	Silty clay loam	CL, CH	A-7, A-6	0	0	100	100	95-100	85-100	35-55	20-35	
	67-80	Silt loam, silty clay loam	CL, CH	A-7, A-6	0	0	100	100	90-100	75-100	35-55	20-35	
3682BL: Medway-----	0-9	Stratified silty clay loam to silt loam, silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	30-45	10-20	
	9-25	Loam, silt loam, silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	95-100	80-95	75-90	70-90	20-45	4-20	
	25-36	Very fine sandy loam, loam SC-SM, SM	CL, ML, SC-SM, SM	A-2, A-4, A-6	0	0	90-100	75-100	45-95	25-75	15-30	NP-15	
7084A: Okaw-----	36-80	Stratified sandy loam to silty clay loam	CL, ML, SC, SM	A-1-b, A-2, A-4, A-6	0	0-5	85-100	65-100	30-95	15-75	15-30	NP-15	
	0-7	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	15-20	
	7-15	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-50	10-25	
7122B: Colp-----	15-54	Silty clay, clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-100	50-80	30-50	
	54-80	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	100	95-100	80-100	45-65	20-35	
	0-8	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	15-20	
7122B: Colp-----	8-12	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	15-20	
	12-70	Silty clay loam, silty clay	CH	A-7	0	0	100	100	95-100	90-100	50-70	30-40	
	70-80	Silty clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-100	50-60	25-35	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
7122C2: Colp-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>		
	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15	
	8-70	Silty clay, silty clay loam	CL, CH	A-7, A-6	0	0	100	100	95-100	90-100	35-60	20-40	
	70-80	Silty clay, silty clay loam	CL, CH	A-7, A-6	0	0	100	100	95-100	85-100	35-55	15-30	
7131A: Alvin-----	0-10	Fine sandy loam, very fine sandy loam	SM, ML	A-4, A-2	0	0	100	100	80-95	30-60	15-25	NP-4	
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2	0	0	100	100	80-95	30-60	15-25	NP-4	
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-2, A-6	0	0	100	100	70-100	20-80	15-40	NP-15	
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM, SP, SP-SM	A-2, A-1, A-3	0	0	95-100	90-100	45-95	4-35	15-20	NP-4	

Table 19.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches <u>Pct</u>	3-10 inches <u>Pct</u>	4	10	40	200		
7131B: Alvin-----	<u>In</u>										<u>Pct</u>	
	0-10	Fine sandy loam, very fine sandy loam	SM, ML	A-4, A-2	0	0	100	100	80-95	30-60	15-25	NP-4
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2	0	0	100	100	80-95	30-60	15-25	NP-4
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-2, A-6	0	0	100	100	70-100	20-80	15-40	NP-15
7131C: Alvin-----	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM, SP, SP-SM	A-2, A-1, A-3	0	0	95-100	90-100	45-95	4-35	15-20	NP-4
	0-10	Fine sandy loam, very fine sandy loam	SM, ML	A-4, A-2	0	0	100	100	80-95	30-60	15-25	NP-4
	10-16	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2	0	0	100	100	80-95	30-60	15-25	NP-4
	16-42	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-2, A-6	0	0	100	100	70-100	20-80	15-40	NP-15
	42-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM, SP, SP-SM	A-2, A-1, A-3	0	0	95-100	90-100	45-95	4-35	15-20	NP-4

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--					Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches		4	10	40	200			
						Pct	Pct							
7131C2: Alvin-----	<u>In</u>											<u>Pct</u>		
	0-7	Fine sandy loam, very fine sandy loam	SM, ML	A-4, A-2	0	0			100	100	80-95	30-60	15-25	NP-4
	7-13	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2	0	0			100	100	80-95	30-60	15-25	NP-4
	13-39	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-2, A-6	0	0			100	100	70-100	20-80	15-40	NP-15
	39-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM, SP, SP-SM	A-2, A-1, A-3	0	0			95-100	90-100	45-95	4-35	15-20	NP-4
7131D2: Alvin-----	0-7	Fine sandy loam, very fine sandy loam	SM, ML	A-4, A-2	0	0			100	100	80-95	30-60	15-25	NP-4
	7-13	Fine sandy loam, very fine sandy loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2	0	0			100	100	80-95	30-60	15-25	NP-4
	13-39	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, CL, ML, SM	A-4, A-2, A-6	0	0			100	100	70-100	20-80	15-40	NP-15
	39-80	Loamy fine sand, very fine sand, fine sandy loam, fine sand	SM, SP, SP-SM	A-2, A-1, A-3	0	0			95-100	90-100	45-95	4-35	15-20	NP-4

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number---				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
7338A: Hurst-----	<u>In</u>											<u>Pct</u>	
	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	95-100	75-100	20-35	4-15	
	7-12	Silty clay loam, silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	20-35	5-15	
	12-62	Silty clay loam, silty clay, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-60	20-35	
	62-80	Stratified silty clay loam to silty clay	CH, CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	15-30	
7338B: Hurst-----	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	95-100	75-100	20-35	4-15	
	7-12	Silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	20-35	5-15	
	12-62	Silty clay loam, silty clay, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-60	20-35	
	62-80	Stratified silty clay loam to silty clay	CH, CL	A-6, A-7	0	0	100	100	90-100	85-100	35-55	15-30	
7401A: Okaw-----	0-10	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	90-100	35-50	15-30	
	10-18	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-50	10-25	
	18-57	Silty clay, clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-100	50-80	30-50	
	57-80	Silty clay loam, silty clay, clay	CH	A-7	0	0	100	100	95-100	80-100	45-65	20-35	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
7460A: Ginat-----	In											Pct	
	0-19 19-34	Silt loam Silt loam, silty clay loam	CL, CL-ML CL	A-4, A-6 A-6	0 0	0 0	100 100	100 100	85-100 90-100	60-90 70-90	20-30 25-35	5-15 10-15	
	34-49	Silty clay loam, silt loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	30-45	15-25	
	49-80	Silty clay loam, silt loam, clay loam, loam, silty clay	CL	A-6, A-7	0	0-5	80-100	75-100	70-100	70-95	35-50	20-30	
7462A: Scioto-ville-----	0-8 8-24	Silt loam Silt loam, silty clay loam, loam	CL-ML, ML CL, CL-ML	A-4 A-4, A-6	0 0	0 0	95-100 95-100	95-100 90-100	90-100 85-100	65-95 70-90	25-35 20-35	4-10 4-15	
	24-52	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	90-100	85-100	65-90	25-40	4-18	
	52-80	Stratified silty clay loam to gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-15	75-100	75-100	65-100	45-70	5-35	NP-15	
7462B: Scioto-ville-----	0-8 8-24	Silt loam Silt loam, silty clay loam, loam	ML, CL-ML CL, CL-ML	A-4 A-4, A-6	0 0	0 0	95-100 95-100	95-100 90-100	90-100 85-100	65-95 70-90	25-35 20-35	4-10 4-15	
	24-52	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	90-100	85-100	65-90	25-40	4-18	
	52-80	Stratified silty clay loam to gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-15	75-100	75-100	65-100	45-70	5-35	NP-15	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200	Pct		
7462C2: Sciotoவில்-----	In				Pct	Pct					Pct		
	0-5	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	90-100	65-95	25-35	4-10	
	5-21	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-100	70-90	20-35	4-15	
	21-49	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	90-100	85-100	65-90	25-40	4-18	
	49-80	Stratified silty clay loam to gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-15	75-100	75-100	65-100	45-70	5-35	NP-15	
7462C3: Sciotoவில்-----	0-3	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	90-100	65-95	25-35	4-10	
	3-19	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-100	70-90	20-35	4-15	
	19-47	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	90-100	85-100	65-90	25-40	4-18	
	47-80	Stratified silty clay loam to gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-15	75-100	75-100	65-100	45-70	5-35	NP-15	
7462D2: Sciotoவில்-----	0-5	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	90-100	65-95	25-35	4-10	
	5-21	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-100	70-90	20-35	4-15	
	21-49	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	90-100	85-100	65-90	25-40	4-18	
	49-80	Stratified silty clay loam to gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-15	75-100	75-100	65-100	45-70	5-35	NP-15	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--					Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200	Pct	Pct		
7462D3: Sciotoville-----	In													
	0-3	Silt loam	CL-ML, ML	A-4	0	0	0	95-100	95-100	90-100	65-95	25-35	4-10	
	3-19	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0	0	95-100	90-100	85-100	70-90	20-35	4-15	
	19-47	Silt loam, silty clay loam, loam	CL, CL-ML	A-4, A-6	0	0-5	0	95-100	90-100	85-100	65-90	25-40	4-18	
	47-80	Stratified silty clay loam to gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-15	0	75-100	75-100	65-100	45-70	5-35	NP-15	
7463A: Wheeling-----	0-10	Silt loam, fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	0	90-100	90-100	85-100	45-90	15-35	NP-10	
	10-49	Clay loam, loam, silt loam, silty clay loam, gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-5	0	90-100	70-100	65-100	45-80	20-40	2-20	
	49-80	Stratified fine sandy loam to very gravelly loamy sand	GM, GP, GW, SM	A-1, A-2, A-3, A-4	0	10-20	0	35-90	20-75	10-65	4-45	15-20	NP-10	
7463B: Wheeling-----	0-10	Silt loam, fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	0	90-100	90-100	85-100	45-90	15-35	NP-10	
	10-49	Clay loam, loam, silt loam, silty clay loam, gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-5	0	90-100	70-100	65-100	45-80	20-40	2-20	
	49-80	Stratified fine sandy loam to very gravelly loamy sand	GM, GP, GW, SM	A-1, A-2, A-3, A-4	0	10-20	0	35-90	20-75	10-65	4-45	15-20	NP-10	

Soil Survey of Alexander County, Illinois

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
7463C2: Wheeling-----	In				Pct	Pct					Pct	
	0-7	Silt loam, fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	90-100	90-100	85-100	45-90	15-35	NP-10
	7-46	Clay loam, loam, silt loam, silty clay loam, gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-5	90-100	70-100	65-100	45-80	20-40	2-20
	46-80	Stratified fine sandy loam to very gravelly loamy sand	GM, GP, GW, SM	A-1, A-2, A-3, A-4	0	10-20	35-90	20-75	10-65	4-45	15-20	NP-10
7463D3: Wheeling-----	0-5	Silt loam, fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	90-100	90-100	85-100	45-90	15-35	NP-10
	5-44	Clay loam, loam, silt loam, silty clay loam, gravelly sandy loam	CL, ML, SC, SM	A-4, A-6	0	0-5	90-100	70-100	65-100	45-80	20-40	2-20
	44-80	Stratified fine sandy loam to gravelly loamy sand	GM, GP, GW, SM	A-1, A-2, A-3, A-4	0	10-20	35-90	20-75	10-65	4-45	15-20	NP-10
7711A: Hatfield-----	0-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	60-90	20-40	5-15
	14-36	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	90-100	70-90	25-35	8-15
	36-45	Silt loam, silty clay loam, clay loam, loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	70-90	25-42	8-20
	45-80	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	30-45	15-25

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
7711B: Hatfield-----	In											Pct	
	0-14 14-36	Silt loam Silt loam, silty clay loam	CL, CL-ML CL	A-4, A-6 A-4, A-6	0 0	0 0	100 100	100 100	85-100 90-100	60-90 70-90	20-40 25-35	5-15 8-15	
	36-45	Silt loam, silty clay loam, clay loam, loam	CL	A-4, A-6, A-7	0	0	100	100	90-100	70-90	25-42	8-20	
	45-80	Silty clay loam, silt loam, clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	30-45	15-25	
8070A: Beaucoup-----	0-16 16-46 46-80	Silty clay loam Silty clay loam Stratified very fine sandy loam to silty clay loam	CL CL CL, CL-ML	A-6, A-7 A-6, A-7 A-6, A-4	0 0 0	0 0 0	100 100 100	100 100 100	90-100 90-100 90-100	85-100 85-100 60-95	30-45 30-45 20-40	15-25 15-30 5-20	
	0-14 14-56 56-80	Silty clay Silty clay, clay Silty clay loam, silty clay	CH, CL CH, CL CH, CL	A-7 A-7 A-6, A-7	0 0 0	0 0 0	100 100 100	100 100 100	90-100 100 95-100	85-100 85-100 90-100	45-85 45-85 35-70	25-55 25-55 20-45	
	0-13 13-40 40-80	Silt loam Silt loam Silt loam, loam, sandy loam	CL-ML, CL, ML CL-ML, CL, ML, SC, SM CL-ML, CL, ML, SC, SM	A-4 A-4 A-4	0 0 0	0 0 0	100 100 100	100 100 100	95-100 70-95 40-90	85-95 40-90 40-90	20-30 15-30 15-30	2-10 NP-10 NP-10	
	0-4 4-50 50-80	Silty clay, clay Clay, silty clay Clay	CH, MH MH MH	A-7 A-7 A-7	0 0 0	0 0 0	100 100 100	100 100 100	100 100 100	95-100 95-100 95-100	60-85 65-85 60-85	33-45 30-45 33-45	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches		4	10	40			200
						Pct	Pct						
8092B: Saryp-----	In										Pct		
	0-9	Fine sand, loamy fine sand, sandy loam, loamy sand, sand	SM	A-2-4	0	0	0	100	100	60-80	15-35	0-14	NP
	9-80	Stratified sand, stratified fine sand, stratified loamy fine sand, stratified loamy sand	SM, SP, SP-SM	A-2-4, A-3	0	0	0	100	100	60-80	2-35	0-14	NP
8108A: Bonnie-----	0-10	Silt loam	CL	A-4, A-6	0	0	0	100	100	95-100	90-100	27-34	8-12
	10-27	Silt loam	CL	A-4, A-6	0	0	0	100	100	95-100	90-100	27-34	8-12
	27-80	Silt loam, silty clay loam	CL	A-6, A-4	0	0	0	100	100	90-100	85-100	25-39	8-15
8109A: Raccoon-----	0-6	Silt loam	CL	A-6, A-4	0	0	0	100	100	95-100	90-100	30-35	10-15
	6-30	Silt loam	CL	A-6, A-4	0	0	0	100	100	95-100	90-100	30-35	10-15
	30-59	Silty clay loam	CL	A-6	0	0	0	100	100	95-100	90-100	35-45	15-20
	59-80	Silt loam, silty clay loam, loam	CL	A-6, A-4	0	0	0	95-100	90-100	75-100	60-90	30-40	10-20
8162A: Gorham-----	0-14	Silty clay loam	CL	A-6, A-7	0	0	0	100	95-100	90-100	70-90	35-50	15-25
	14-36	Silty clay loam, silty clay	CH, CL	A-7	0	0	0	100	100	100	90-95	40-55	15-30
	36-54	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0	0	100	80-90	70-80	50-80	30-45	10-20
	54-80	Sand, loamy sand, sandy loam, fine sandy loam, fine sand	SC, SC-SM, SM, SP-SM	A-2, A-4	0	0	0	100	75-90	55-80	10-50	15-30	NP-10

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		Pct
8175B: Lamont-----	In										Pct		
	0-8	Fine sandy loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	80-95	25-50	15-25	5-10
	8-23	Fine sandy loam, loamy fine sand, sandy loam	SC-SM, SM	A-2, A-4	0	0	0	100	100	80-95	15-50	15-25	NP-5
	23-56	Fine sandy loam, loam, sandy clay loam	SC, SC-SM	A-2, A-4	0	0	0	100	100	85-95	30-50	20-30	5-10
	56-80	Loamy fine sand, loamy sand, sand	SP-SM, SM	A-2, A-3	0	0	0	100	100	70-90	5-25	0-14	NP
8178A: Ruark-----	0-18	Fine sandy loam, loam, very fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	0	100	100	90-100	40-60	15-25	NP-7
	18-37	Loam, clay loam, sandy clay loam	CL, CL-ML	A-4, A-6	0	0	0	100	100	95-100	55-70	25-40	5-15
	37-80	Sandy loam, fine sandy loam, sandy clay loam	CL-ML, ML, SC-SM, SM	A-4	0	0	0	100	90-100	90-100	40-75	15-25	NP-7
	0-9	Silt loam	CL, CL-ML	A-4	0	0	0	100	100	100	95-100	20-30	5-10
	9-25	Silt loam	CL, CL-ML	A-4	0	0	0	100	100	100	95-100	20-30	5-10
8180A: Dupo-----	25-80	Silty clay, clay, silty clay loam	CH	A-7-6	0	0	0	100	100	100	98-100	50-70	30-45

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number---				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
8184A: Roby-----	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
	0-13	Fine sandy loam, loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2-4	0	0	100	100	80-98	33-56	12-20	NP-4
	13-16	Loamy fine sand, fine sand, fine sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	90-100	65-90	20-50	15-20	NP-7
	16-49	Fine sandy loam, sandy loam, loam	SM, ML	A-2, A-4	0	0	90-100	90-100	85-95	30-75	20-34	NP-7
	49-80	Stratified gravelly sand to loam	ML, SC-SM, SM, SP-SM	A-2, A-4	0	0	80-100	75-90	50-90	10-65	15-20	NP-7
8184B: Roby-----	0-13	Fine sandy loam, loam, sandy loam, loamy fine sand	SM, ML	A-4, A-2-4	0	0	100	100	80-98	33-56	12-20	NP-4
	13-16	Loamy fine sand, fine sand, fine sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	90-100	65-90	20-50	15-20	NP-7
	16-49	Fine sandy loam, sandy loam, loam	SM, ML	A-2, A-4	0	0	90-100	90-100	85-95	30-75	20-34	NP-7
	49-80	Stratified gravelly sand to loam	ML, SC-SM, SM, SP-SM	A-2, A-4	0	0	80-100	75-90	50-90	10-65	15-20	NP-7
8284A: Tice-----	0-16	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	30-45	10-20
	16-72	Silty clay loam, silt loam	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	15-30
	72-80	Stratified loam to silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	60-95	55-80	25-45	5-20

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
In				Pct	Pct						Pct	
8288A: Petrolia-----	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	80-100	35-45	15-22
	8-55	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	85-100	35-45	15-22
	55-80	Silty clay loam, silt loam	CL	A-6, A-7, A-4	0	0	100	95-100	80-100	60-100	20-45	8-22
8331A: Haymond-----	0-20	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	85-100	20-30	3-10
	20-60	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-10
	60-80	Fine sandy loam, loam, silt loam	ML, SC, SM	A-4	0	0	95-100	90-100	65-100	35-90	15-35	2-15
8333A: Wakeland-----	0-8	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	8-68	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	68-80	Silt loam, loam	ML, CL, CL-ML	A-4	0	0	100	100	85-100	60-100	16-28	3-9
8334A: Birds-----	0-22	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-100	24-34	8-15
	22-80	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-100	24-34	8-15
8382A: Belknap-----	0-7	Silt loam	CL-ML, ML	A-4	0	0	100	95-100	90-100	80-100	20-30	2-8
	7-59	Silt loam	CL-ML, ML	A-4	0	0	100	95-100	90-100	80-100	20-35	NP-12
	59-80	Silt loam, loam, silty clay loam	CL, CL-ML, ML	A-6, A-4	0	0	100	95-100	95-100	75-100	20-40	3-20
8420A: Piopolis-----	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	35-50	15-25
	7-37	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-95	35-50	15-25
	37-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25
8422A: Cape-----	0-10	Silty clay loam	CL	A-7, A-6	0	0	100	100	100	95-100	35-50	20-30
	10-22	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	100	100	95-100	35-50	20-30
	22-80	Silty clay, clay, silty clay loam	CH	A-7	0	0	100	100	100	90-100	39-70	30-45

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number---					Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
											Pct		
8422A+: Cape-----	<u>In</u>												
	0-16	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	70-90	27-34	8-12	
	16-22	Silty clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	100	100	95-100	35-50	20-30	
8426A: Karnak-----	22-80	Silty clay, clay, silty clay loam	CH	A-7	0	0	100	100	100	90-100	39-70	30-45	
	0-5	Silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	95-100	45-80	25-45	
	5-50	Silty clay, clay	CH	A-7	0	0	100	100	95-100	95-100	45-80	20-40	
8426A+: Karnak-----	50-80	Silty clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-100	45-80	25-45	
	0-13	Silt loam	ML, CL	A-4, A-6, A-7	0	0	100	100	90-100	85-95	30-45	5-20	
	13-18	Silty clay loam, silty clay	CH	A-7	0	0	100	100	95-100	95-100	45-80	25-45	
8452A: Riley-----	18-63	Silty clay, clay	CH	A-7	0	0	100	100	95-100	95-100	45-80	20-40	
	63-80	Silty clay, silty clay loam	CH, CL	A-7	0	0	100	100	95-100	85-100	45-80	25-45	
	0-13	Silty clay loam, clay loam, silt loam, loam	CL	A-6	0	0	100	100	95-100	80-100	30-40	15-25	
8426A: Karnak-----	13-27	Clay loam, loam, sandy clay loam, silt loam, silty clay loam	CL, SC	A-7-6, A-6, A-7	0	0	100	100	90-100	40-85	35-50	15-25	
	27-80	Loamy sand, sand, loamy fine sand, stratified fine sandy loam to silty clay loam	SM, SC-SM, SP-SM	A-2-4, A-2, A-4	0	0	100	100	90-100	10-40	0-0	NP	

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
8452B: Riley-----	0-13	Silty clay loam, clay loam, silt loam, loam	CL	A-6	0	0	100	100	95-100	80-100	30-40	15-25
	13-27	Clay loam, loam, sandy clay loam, silt loam, silty clay loam	CL, SC	A-7-6, A-6, A-7	0	0	100	100	90-100	40-85	35-50	15-25
	27-80	Loamy sand, sand, loamy fine sand, stratified fine sandy loam to silty clay loam	SM, SC-SM, SP-SM	A-2-4, A-2, A-4	0	0	100	100	90-100	10-40	0-0	NP
8456B: Ware-----	0-14	Loam, very fine sandy loam, silt loam	SC-SM, SM	A-4	0	0	100	100	95-100	35-50	15-25	NP-5
	14-21	Very fine sandy loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	95-100	50-70	20-30	2-10
	21-80	Very fine sandy loam, loamy fine sand, stratified very fine sandy loam to loamy fine sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	60-90	10-60	15-25	NP-6
8475B: Elsah-----	0-10	Silt loam	CL, CL-ML	A-4, A-6	0-1	0-5	95-100	90-100	85-100	80-100	20-35	5-15
	10-32	Very gravelly silt loam, very gravelly loam	CL, ML, SC, SM	A-4, A-6	0-5	10-30	50-90	35-70	35-65	35-60	15-30	3-15
	32-80	Very gravelly loam, gravelly loam, extremely gravelly loam	CL, ML, SC, SM	A-4, A-6, A-2-4, A-2-6	0-10	10-65	45-85	30-70	25-65	20-60	0-25	NP-15

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
8589B: Bowdre-----	<u>In</u>										<u>Pct</u>	
	0-11	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	51-65	28-40
	11-17	Silty clay, clay, silty	CH	A-7	0	0	100	100	95-100	90-95	51-65	28-40
	17-23	Stratified silt loam, stratified loam, stratified sandy loam, stratified very fine	CL, CL-ML, SC-SM	A-4	0	0	100	100	90-100	70-90	25-35	3-12
8590A: Cairo-----	23-80	Stratified sandy loam, stratified silt loam, stratified loam, stratified very fine sandy loam, stratified loamy sand	ML, CL-ML, SC-SM	A-4, A-2	0	0	100	100	80-100	30-90	10-20	1-5
	0-17	Silty clay	CH	A-7-6, A-7	0	0	100	100	95-100	90-100	51-80	31-55
	17-30	Silty clay, clay	CH	A-7-6, A-7	0	0	100	100	90-100	75-100	51-80	31-55
	30-80	Sandy loam, loamy fine sand, fine sand	SC, SC-SM, SM	A-2-4, A-2, A-4	0	0	100	65-100	50-80	15-45	15-30	NP-10
8597A: Armiesburg-----	0-15	Silty clay loam	CL, CH	A-7, A-6	0	0	100	100	95-100	85-100	35-55	20-35
	15-67	Silty clay loam	CL, CH	A-7, A-6	0	0	100	100	95-100	85-100	35-55	20-35
	67-80	Silt loam, silty clay loam	CL, CH	A-7, A-6	0	0	100	100	90-100	75-100	35-55	20-35

Table 19.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<u>In</u>				<u>Pct</u>	<u>Pct</u>					<u>Pct</u>	
8682B: Medway-----	0-9	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	30-45	10-20
	9-25	Loam, silt loam, silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	95-100	80-95	75-90	70-90	20-45	4-20
	25-36	Very fine sandy loam, loam	CL, ML, SC-SM, SM	A-2, A-4, A-6	0	0	90-100	75-100	45-95	25-75	15-30	NP-15
	36-80	Stratified loamy fine sand to silty clay loam	CL, ML, SC, SM	A-4, A-6, A-1-b, A-2	0	0-5	85-100	65-100	30-95	15-75	15-30	NP-15
MW. Miscellaneous water												
W. Water												

Table 20.—Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
75C: Drury-----	0-6	0-10	70-80	10-20	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	6-33	0-10	70-80	18-20	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
	33-80	3-50	35-77	15-20	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.0-0.2	.49	.49			
75C3: Drury-----	0-1	0-10	70-80	10-20	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.43	.43	4	5	56
	1-28	0-10	70-80	18-20	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
	28-80	3-50	35-77	15-20	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.0-0.2	.49	.49			
75D: Drury-----	0-6	0-10	70-80	10-20	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	6-33	0-10	70-80	18-20	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
	33-80	3-50	35-77	15-20	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.0-0.2	.49	.49			
79B: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79C: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79C2: Menfro-----	0-7	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	7-59	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	59-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79C3: Menfro-----	0-5	0-5	68-85	12-35	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	4	6	48
	5-57	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	57-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79D: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
79D2: Menfro-----	0-7	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	7-59	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	59-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79D3: Menfro-----	0-5	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	4	6	48
	5-57	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	57-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79E: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79E2: Menfro-----	0-7	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	7-59	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	59-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79E3: Menfro-----	0-5	0-5	68-85	12-35	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	4	6	48
	5-57	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	57-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
79F: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
164B: Stoy-----	0-13	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	13-32	0-5	60-73	27-35	1.35-1.55	0.06-0.2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	32-45	0-5	60-73	27-35	1.30-1.60	0.06-0.2	0.09-0.12	3.0-5.9	0.2-0.5	.37	.37			
175A: Lamont-----	45-80	0-10	65-80	20-27	1.40-1.75	0.06-0.2	0.10-0.15	0.0-2.9	0.2-0.5	.43	.43			
	0-11	43-85	5-45	5-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	11-17	45-90	5-49	2-19	1.50-1.55	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
175B: Lamont-----	17-27	25-80	5-45	5-30	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	27-80	35-90	5-45	2-20	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
	0-11	43-85	5-45	5-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	11-17	45-90	5-49	2-19	1.50-1.55	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	17-27	25-80	5-45	5-30	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	27-80	35-90	5-45	2-20	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
175C: Lamont-----	0-11	43-85	5-45	5-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	11-17	45-90	5-49	2-19	1.50-1.55	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	17-27	25-80	5-45	5-30	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	27-80	35-90	5-45	2-20	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			
214B: Hosmer-----	0-7	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	4	5	56
	7-28	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43	.43			
	28-67	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.2	.43	.43			
	67-80	0-10	65-85	15-27	1.50-1.70	0.6-2	0.22-0.24	0.0-2.9	0.0-0.2	.43	.43			
214C: Hosmer-----	0-7	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	4	5	56
	7-28	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43	.43			
	28-67	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.2	.43	.43			
	67-80	0-10	65-85	15-27	1.50-1.70	0.6-2	0.22-0.24	0.0-2.9	0.0-0.2	.43	.43			
214C2: Hosmer-----	0-4	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	4	5	56
	4-25	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43	.43			
	25-64	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.2	.43	.43			
	64-80	0-10	65-85	15-27	1.50-1.70	0.6-2	0.22-0.24	0.0-2.9	0.0-0.2	.43	.43			
214C3: Hosmer-----	0-2	0-5	68-88	12-33	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	3	6	48
	2-23	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43	.43			
	23-62	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.2	.43	.43			
	62-80	0-10	65-85	15-27	1.50-1.70	0.6-2	0.22-0.24	0.0-2.9	0.0-0.2	.43	.43			
214D2: Hosmer-----	0-4	0-5	68-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	4	5	56
	4-25	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43	.43			
	25-64	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.2	.43	.43			
	64-80	0-10	65-85	15-27	1.50-1.70	0.6-2	0.22-0.24	0.0-2.9	0.0-0.2	.43	.43			
214D3: Hosmer-----	0-2	0-5	68-88	12-33	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43	3	6	48
	2-23	0-5	65-82	18-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-1.0	.43	.43			
	23-62	0-5	65-85	15-35	1.60-1.70	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.2	.43	.43			
	62-80	0-10	65-85	15-27	1.50-1.70	0.6-2	0.22-0.24	0.0-2.9	0.0-0.2	.43	.43			
216D: Stookey-----	0-6	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	6-62	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	62-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
216D2: Stookey-----	0-3	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	3-59	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	59-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216E: Stookey-----	0-6	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	6-62	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	62-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216E2: Stookey-----	0-3	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	3-59	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	59-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216E3: Stookey-----	0-1	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	4	5	56
	1-57	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	57-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216F: Stookey-----	0-6	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	6-62	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	62-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216G: Stookey-----	0-6	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	6-62	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	62-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
471F: Clarksville----	0-16	0-50	50-80	0-25	1.20-1.40	2-6	0.12-0.17	0.0-2.9	0.5-2.0	.28	.32	3	8	0
	16-26	5-30	30-70	25-41	1.30-1.45	2-6	0.06-0.10	0.0-2.9	0.2-0.5	.17	.20			
	26-80	5-40	15-60	25-75	1.20-1.40	0.6-2	0.05-0.08	3.0-5.9	0.1-0.4	.02	.15			
471G: Clarksville----	0-16	0-50	50-80	0-25	1.20-1.40	2-6	0.12-0.17	0.0-2.9	0.5-2.0	.28	.32	3	8	0
	16-26	5-30	30-70	25-41	1.30-1.45	2-6	0.06-0.10	0.0-2.9	0.2-0.5	.17	.20			
	26-80	5-40	15-60	25-75	1.20-1.40	0.6-2	0.05-0.08	3.0-5.9	0.1-0.4	.02	.15			
477B: Winfield-----	0-9	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.37	.37	5	5	56
	9-13	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	13-56	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	56-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
477C: Winfield-----	0-9	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.37	.37	5	5	56
	9-13	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	13-56	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	56-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
477C2: Winfield-----	0-6	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.37	.37	5	5	56
	6-10	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	10-53	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	53-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
477C3: Winfield-----	0-4	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.37	.37	4	6	48
	4-8	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.2-0.8	.37	.37			
	8-51	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	51-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
477D2: Winfield-----	0-6	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.37	.37	5	5	56
	6-10	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	10-53	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	53-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
477D3: Winfield-----	0-4	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.37	.37	4	6	48
	4-8	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	8-51	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	51-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
477E3: Winfield-----	0-4	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.37	.37	4	6	48
	4-8	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	8-51	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	51-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
477F: Winfield-----	0-9	0-5	68-85	12-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.37	.37	5	5	56
	9-13	0-5	65-78	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	13-56	0-5	65-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	56-80	0-10	65-85	8-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
717F: Stookey-----	0-6	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	6-62	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	62-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
717F: Clarksville-----	0-16	0-50	50-80	0-25	1.20-1.40	2-6	0.12-0.17	0.0-2.9	0.5-2.0	.28	.32	3	8	0
	16-26	5-30	30-70	25-41	1.30-1.45	2-6	0.06-0.10	0.0-2.9	0.2-0.5	.17	.20			
	26-80	5-40	15-60	25-75	1.20-1.40	0.6-2	0.05-0.08	3.0-5.9	0.1-0.4	.02	.15			
717G: Clarksville-----	0-16	0-50	50-80	0-25	1.20-1.40	2-6	0.12-0.17	0.0-2.9	0.5-2.0	.28	.32	3	8	0
	16-26	5-30	30-70	25-41	1.30-1.45	2-6	0.06-0.10	0.0-2.9	0.2-0.5	.17	.20			
	26-80	5-40	15-60	25-75	1.20-1.40	0.6-2	0.05-0.08	3.0-5.9	0.1-0.4	.02	.15			
Stookey-----	0-6	0-5	73-95	0-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49	5	5	56
	6-62	0-5	68-82	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	62-80	0-5	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
801B: Orthents-----	0-80	5-44	51-80	5-35	1.70-1.80	0.2-2	0.16-0.19	3.0-5.9	0.0-1.0	.43	.43	5	6	48
802D: Orthents-----	0-6	5-50	30-77	18-40	1.70-1.75	0.2-0.6	0.18-0.22	3.0-5.9	0.1-1.0	.43	.32	5	6	48
	6-80	5-67	15-77	18-30	1.70-1.90	0.2-0.6	0.16-0.20	3.0-5.9	0.0-1.0	.43	.32			
832F: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
Clarksville-----	0-16	0-50	50-80	0-25	1.20-1.40	2-6	0.12-0.17	0.0-2.9	0.5-2.0	.28	.32	3	8	0
	16-26	5-30	30-70	25-41	1.30-1.45	2-6	0.06-0.10	0.0-2.9	0.2-0.5	.17	.20			
	26-80	5-40	15-60	25-75	1.20-1.40	0.6-2	0.05-0.08	3.0-5.9	0.1-0.4	.02	.15			
832G: Clarksville-----	0-16	0-50	50-80	0-25	1.20-1.40	2-6	0.12-0.17	0.0-2.9	0.5-2.0	.28	.32	3	8	0
	16-26	5-30	30-70	25-45	1.30-1.45	2-6	0.06-0.10	0.0-2.9	0.2-0.5	.17	.20			
	26-80	5-40	15-60	25-75	1.20-1.40	0.6-2	0.05-0.08	3.0-5.9	0.1-0.4	.02	.15			
Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
833F: Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.43	.43			
Goss-----	0-7	0-40	50-90	10-27	1.10-1.30	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.28	.32	2	8	0
	7-22	5-50	30-80	10-40	1.10-1.30	2-6	0.06-0.10	0.0-2.9	0.0-0.1	.20	.24			
	22-80	5-40	15-60	35-80	1.30-1.50	0.6-2	0.04-0.09	3.0-5.9	0.0-0.5	.15	.17			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
833G: Goss-----	0-7	0-40	50-90	10-27	1.10-1.30	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.28	.32	2	8	0
	7-22	5-50	30-80	10-40	1.10-1.30	2-6	0.06-0.10	0.0-2.9	0.0-0.1	.20	.24			
	22-80	5-40	15-60	35-80	1.30-1.50	0.6-2	0.04-0.09	3.0-5.9	0.0-0.5	.15	.17			
Menfro-----	0-10	0-5	68-85	12-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	0.5-2.0	.43	.43	5	5	56
	10-62	0-5	63-83	17-33	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	62-80	0-10	65-85	8-33	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.2	.55	.55			
864. Pits, quarries														
865. Pits, gravel														
1426A: Karnak-----	0-5	0-5	30-60	40-65	1.20-1.40	0.06-0.2	0.11-0.14	6.0-8.9	2.0-3.0	.24	.24	5	4	86
	5-50	0-5	30-60	40-65	1.30-1.50	0.06-0.2	0.09-0.13	6.0-8.9	0.0-0.5	.28	.28			
	50-80	0-5	40-60	35-60	1.35-1.55	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28			
1843A: Bonnie-----	0-10	1-32	50-80	18-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	10-27	1-32	50-80	18-27	1.40-1.60	0.2-0.6	0.21-0.24	0.0-2.9	0.0-1.0	.49	.49			
	27-80	3-42	40-79	18-30	1.40-1.60	0.2-0.6	0.14-0.24	0.0-2.9	0.0-1.0	.49	.49			
Petrolia-----	0-8	0-19	46-70	27-35	1.20-1.40	0.2-0.6	0.21-0.23	3.0-5.9	2.0-3.0	.32	.32	5	7	38
	8-55	0-19	46-70	27-35	1.35-1.45	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
	55-80	0-40	40-80	15-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
1845A: Darwin-----	0-14	0-10	45-55	40-45	1.20-1.40	0.01-0.06	0.11-0.14	9.0-25.0	4.0-5.0	.24	.24	5	4	86
	14-56	0-10	35-55	45-60	1.30-1.50	0.01-0.06	0.11-0.14	9.0-25.0	0.0-2.0	.24	.24			
	56-80	0-10	35-70	30-55	1.40-1.60	0.06-0.2	0.10-0.20	6.0-8.9	0.0-0.5	.24	.24			
Jacob-----	0-4	0-5	25-45	55-70	1.30-1.50	0.06-0.2	0.11-0.13	9.0-25.0	2.0-4.0	.28	.28	5	4	86
	4-50	0-5	20-40	60-75	1.35-1.45	0.01-0.06	0.10-0.13	9.0-25.0	0.0-2.0	.28	.28			
	50-80	0-5	25-45	55-70	1.30-1.45	0.01-0.06	0.10-0.13	9.0-25.0	0.0-1.5	.28	.28			
1846A: Karnak-----	0-5	0-5	30-60	40-65	1.20-1.40	0.06-0.2	0.11-0.14	6.0-8.9	2.0-3.0	.24	.24	5	7	38
	5-50	0-5	30-60	40-65	1.30-1.50	0.01-0.2	0.09-0.13	6.0-8.9	0.0-0.5	.28	.28			
	50-80	0-5	40-60	35-60	1.35-1.55	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28			
Cape-----	0-10	0-10	40-70	30-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	1.0-3.0	.32	.32	5	7	38
	10-22	0-10	35-60	35-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	22-80	0-15	35-60	35-65	1.30-1.60	0.01-0.06	0.10-0.13	6.0-8.9	0.1-1.0	.28	.28			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
3070L: Beaucoup-----	0-16	1-10	55-72	27-35	1.15-1.35	0.6-2	0.15-0.20	3.0-5.9	5.0-6.0	.28	.28	5	7	38
	16-46	1-10	55-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-2.0	.32	.32			
	46-80	5-75	15-80	10-30	1.40-1.65	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.32	.32			
3071A: Darwin-----	0-14	0-10	45-55	40-45	1.20-1.40	0.01-0.06	0.11-0.14	9.0-25.0	4.0-5.0	.24	.24	5	4	86
	14-56	0-10	35-55	45-60	1.30-1.50	0.01-0.06	0.11-0.14	9.0-25.0	0.0-2.0	.24	.24			
	56-80	0-10	35-70	30-55	1.40-1.60	0.06-0.2	0.10-0.20	6.0-8.9	0.0-0.5	.24	.24			
3071L: Darwin-----	0-14	0-10	45-55	40-45	1.20-1.40	0.01-0.06	0.11-0.14	9.0-25.0	4.0-5.0	.24	.24	5	4	86
	14-56	0-10	35-55	45-60	1.30-1.50	0.01-0.06	0.11-0.14	9.0-25.0	0.0-2.0	.24	.24			
	56-80	0-10	35-70	30-55	1.40-1.60	0.06-0.2	0.10-0.20	6.0-8.9	0.0-0.5	.24	.24			
3092BL: Saryp-----	0-9	70-95	0-28	2-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02	5	2	134
	9-80	70-95	0-28	2-5	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.02	.02			
3108A: Bonnie-----	0-10	1-32	50-80	18-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	10-27	1-32	50-80	18-27	1.40-1.60	0.2-0.6	0.21-0.24	0.0-2.9	0.0-1.0	.49	.49			
	27-80	3-42	40-79	18-30	1.40-1.60	0.2-0.6	0.14-0.24	0.0-2.9	0.0-1.0	.49	.49			
3162L: Gorham-----	0-14	2-15	47-60	27-38	1.30-1.50	0.2-0.6	0.13-0.20	3.0-5.9	4.0-5.0	.28	.28	5	4	86
	14-36	2-15	45-60	27-45	1.35-1.55	0.2-0.6	0.11-0.18	3.0-5.9	0.2-1.0	.28	.28			
	36-54	25-58	20-40	22-35	1.40-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	54-80	67-93	2-18	0-15	1.50-1.75	2-20	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
3180L: Dupo-----	0-9	0-10	75-90	10-18	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	9-25	0-10	75-90	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	25-80	0-7	33-60	30-60	1.35-1.60	0.06-0.2	0.08-0.19	6.0-8.9	0.2-1.0	.32	.32			
3284L: Tice-----	0-16	0-15	50-70	27-35	1.25-1.45	0.6-2	0.21-0.24	3.0-5.9	2.0-3.0	.32	.32	5	7	38
	16-72	0-15	50-70	22-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.32	.32			
	72-80	5-40	45-65	15-30	1.40-1.60	0.6-2	0.20-0.22	3.0-5.9	0.0-1.0	.32	.32			
3288L: Petrolia-----	0-8	0-19	46-70	27-35	1.20-1.40	0.2-0.6	0.21-0.23	3.0-5.9	2.0-3.0	.32	.32	5	7	38
	8-55	0-19	46-70	27-35	1.35-1.45	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
	55-80	0-40	40-80	15-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
3331A: Haymond-----	0-20	1-35	45-85	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	20-60	1-35	47-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.49	.49			
	60-80	1-65	9-80	2-26	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
3331L: Haymond-----	0-20	1-35	45-85	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	20-60	1-35	47-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.49	.49			
	60-80	1-65	9-80	2-26	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
3333A: Wakeland-----	0-8	1-14	68-85	10-18	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	8-68	1-14	68-85	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
	68-80	3-41	49-85	10-18	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
3333L: Wakeland-----	0-8	1-14	68-85	10-18	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	8-68	1-14	68-85	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
	68-80	3-41	49-85	10-18	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
3334A: Birds-----	0-22	0-15	60-75	15-25	1.30-1.50	0.2-0.6	0.21-0.25	0.0-2.9	1.0-3.0	.43	.43	5	6	56
	22-80	3-25	55-70	18-27	1.40-1.60	0.2-0.6	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
3334L: Birds-----	0-22	0-15	60-75	15-25	1.30-1.50	0.2-0.6	0.21-0.25	0.0-2.9	1.0-3.0	.43	.43	5	6	56
	22-80	3-25	55-70	18-27	1.40-1.60	0.2-0.6	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
3382A: Belknap-----	0-7	1-27	65-85	8-18	1.30-1.55	0.2-2	0.21-0.25	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-59	1-27	65-85	8-25	1.40-1.60	0.2-2	0.21-0.24	0.0-2.9	0.0-2.0	.49	.49			
	59-80	5-27	65-85	8-30	1.35-1.65	0.2-2	0.14-0.24	0.0-2.9	0.0-1.0	.49	.49			
3420A: Piopolis-----	0-7	0-25	45-73	27-35	1.20-1.40	0.06-0.2	0.21-0.23	3.0-5.9	1.0-3.0	.32	.32	5	7	38
	7-37	0-25	45-73	27-35	1.40-1.60	0.06-0.2	0.18-0.20	3.0-5.9	0.1-2.0	.32	.32			
	37-80	0-30	45-75	25-38	1.50-1.70	0.06-0.2	0.18-0.20	3.0-5.9	0.1-2.0	.32	.32			
3422A: Cape-----	0-10	0-10	40-70	30-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	1.0-3.0	.32	.32	5	7	38
	10-22	0-10	35-60	35-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	22-80	0-15	35-60	35-65	1.30-1.60	0.01-0.06	0.10-0.13	6.0-8.9	0.1-1.0	.28	.28			
3422A+: Cape-----	0-16	0-38	50-80	12-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	16-22	0-10	35-60	35-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	22-80	0-15	35-60	35-65	1.30-1.60	0.01-0.06	0.10-0.13	6.0-8.9	0.1-1.0	.28	.28			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group index
										Kw	Kf	T	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
3426L: Karnak-----	0-5	0-5	30-60	38-65	1.20-1.40	0.06-0.2	0.11-0.14	6.0-8.9	2.0-3.0	.24	.24	5	4
	5-50	0-5	30-60	40-65	1.30-1.50	0.01-0.2	0.09-0.13	6.0-8.9	0.0-0.5	.28	.28		
	50-80	0-5	40-60	35-60	1.35-1.55	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28		
													86
3449L: Armiesburg-----	0-15	0-30	40-80	20-35	1.30-1.45	0.6-2	0.21-0.23	3.0-5.9	2.0-4.0	.28	.28	5	7
	15-67	0-30	40-70	30-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.32	.32		
	67-80	0-30	40-80	20-35	1.30-1.60	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.49	.49		
													38
Sarpy-----	0-9	70-95	0-28	2-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02	5	2
	9-80	70-95	0-28	2-5	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.02	.02		134
3452L: Riley-----	0-13	1-25	45-70	20-35	1.15-1.35	0.6-2	0.17-0.23	3.0-5.9	3.0-4.0	.28	.28	4	7
	13-27	19-65	5-57	24-35	1.25-1.45	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.32	.32		
	27-80	19-90	1-54	2-27	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.10		
													38
3456B: Ware-----	0-14	45-80	5-50	5-20	1.40-1.70	0.6-2	0.15-0.18	0.0-2.9	2.0-3.0	.24	.24	5	3
	14-21	5-80	5-75	8-32	1.40-1.70	0.6-2	0.20-0.24	0.0-2.9	0.2-0.5	.32	.32		
	21-80	30-82	10-62	8-18	1.60-1.70	2-20	0.07-0.19	0.0-2.9	0.2-0.5	.32	.32		
													86
3456BL: Ware-----	0-14	45-80	5-50	5-20	1.40-1.70	0.6-2	0.15-0.18	0.0-2.9	2.0-3.0	.24	.24	5	3
	14-21	5-80	5-75	8-32	1.40-1.70	0.6-2	0.20-0.24	0.0-2.9	0.2-0.5	.32	.32		
	21-80	30-82	10-62	8-18	1.60-1.70	2-20	0.07-0.19	0.0-2.9	0.2-0.5	.32	.32		
													86
3590L: Cairo-----	0-17	0-19	30-60	40-60	1.10-1.40	0.01-0.06	0.10-0.18	6.0-8.9	5.0-7.0	.24	.24	5	4
	17-30	0-35	30-60	35-55	1.40-1.65	0.01-0.06	0.08-0.12	6.0-8.9	0.0-2.0	.28	.28		
	30-80	55-90	5-40	5-15	1.50-1.70	6-20	0.08-0.18	0.0-2.9	0.0-0.5	.17	.24		
													86
3597L: Armiesburg-----	0-15	0-30	40-80	20-35	1.30-1.45	0.6-2	0.21-0.23	3.0-5.9	2.0-4.0	.28	.28	5	7
	15-67	0-30	40-70	30-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.32	.32		
	67-80	0-30	40-80	20-35	1.30-1.60	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.32	.32		
													38
3682BL: Medway-----	0-9	0-85	10-60	5-40	1.25-1.50	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28	.28	5	7
	9-25	0-50	10-60	18-40	1.20-1.50	0.6-2	0.14-0.18	0.0-2.9	3.0-4.0	.32	.32		
	25-36	5-90	5-65	5-30	1.20-1.60	0.6-6	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24		
	36-80	10-90	5-60	5-30	1.20-1.60	0.6-6	0.08-0.15	0.0-2.9	0.0-0.5	.02	.24		

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
7084A: Okaw-----	0-7	1-25	60-80	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	3	6	48
	7-15	1-28	60-80	12-30	1.30-1.50	0.2-0.6	0.18-0.20	0.0-2.9	0.5-1.0	.37	.37			
	15-54	1-25	20-60	35-60	1.35-1.60	0.01-0.06	0.09-0.18	6.0-8.9	0.0-0.5	.28	.28			
	54-80	1-25	20-60	35-60	1.50-1.70	0.01-0.06	0.08-0.20	6.0-8.9	0.0-0.5	.28	.28			
7122B: Colp-----	0-8	1-10	63-75	20-27	1.30-1.50	0.2-0.6	0.21-0.25	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	8-12	1-10	65-75	18-25	1.30-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
	12-70	5-15	40-60	35-50	1.45-1.70	0.06-0.2	0.10-0.17	6.0-8.9	0.0-0.5	.32	.32			
	70-80	5-15	40-60	30-45	1.50-1.70	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.37	.37			
7122C2: Colp-----	0-8	1-10	63-75	20-27	1.30-1.50	0.2-0.6	0.21-0.25	0.0-2.9	1.0-2.0	.43	.43	4	6	48
	8-70	5-15	40-60	35-65	1.45-1.70	0.06-0.2	0.10-0.17	6.0-8.9	0.0-0.5	.32	.32			
	70-80	5-15	40-60	30-45	1.50-1.70	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.32	.32			
7131A: Alvin-----	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24	.24			
	16-42	35-80	10-40	10-25	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24	.24			
7131B: Alvin-----	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24	.24			
	16-42	35-80	10-40	10-25	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24	.24			
7131C: Alvin-----	0-10	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	10-16	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24	.24			
	16-42	35-80	10-40	10-25	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	42-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24	.24			
7131C2: Alvin-----	0-7	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	7-13	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24	.24			
	13-39	35-80	10-40	10-25	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	39-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24	.24			
7131D2: Alvin-----	0-7	45-80	3-45	8-19	1.50-1.70	2-6	0.14-0.17	0.0-2.9	0.5-1.0	.24	.24	5	3	86
	7-13	45-85	3-45	8-19	1.50-1.70	2-6	0.10-0.17	0.0-2.9	0.0-0.5	.24	.24			
	13-39	35-80	10-40	10-25	1.50-1.70	2-6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	39-80	50-97	0-45	3-10	1.50-1.70	2-6	0.04-0.08	0.0-2.9	0.0-0.3	.24	.24			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
7338A: Hurst-----	0-7	1-10	63-79	20-27	1.25-1.45	0.2-0.6	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	7-12	1-10	60-80	18-30	1.30-1.50	0.2-0.6	0.20-0.22	0.0-2.9	0.0-0.5	.32	.32			
	12-62	1-35	30-69	30-48	1.45-1.70	0.01-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.28	.28			
	62-80	1-19	36-70	20-45	1.50-1.70	0.01-0.06	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28			
7338B: Hurst-----	0-7	1-10	63-79	20-27	1.25-1.45	0.2-0.6	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	3	6	48
	7-12	1-10	60-80	18-30	1.30-1.50	0.2-0.6	0.20-0.22	0.0-2.9	0.0-0.5	.32	.32			
	12-62	1-35	30-69	30-48	1.45-1.70	0.01-0.06	0.10-0.17	6.0-8.9	0.0-0.5	.28	.28			
	62-80	1-19	36-70	20-45	1.50-1.70	0.01-0.06	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28			
7401A: Okaw-----	0-10	1-19	41-70	27-40	1.20-1.40	0.2-0.6	0.21-0.23	3.0-5.9	1.0-3.0	.43	.43	2	7	38
	10-18	1-28	60-80	12-30	1.30-1.50	0.2-0.6	0.18-0.20	0.0-2.9	0.5-1.0	.49	.49			
	18-57	1-25	20-60	35-60	1.35-1.60	0.01-0.06	0.09-0.18	6.0-8.9	0.0-0.5	.32	.32			
	57-80	1-25	20-60	35-60	1.50-1.70	0.01-0.06	0.08-0.20	6.0-8.9	0.0-0.5	.28	.28			
7460A: Ginat-----	0-19	5-15	65-80	12-20	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	19-34	5-15	51-73	22-34	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.32	.32			
	34-49	5-25	40-74	21-42	1.60-1.80	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.5	.32	.32			
	49-80	5-25	40-74	21-42	1.40-1.60	0.2-0.6	0.06-0.08	3.0-5.9	0.0-0.5	.32	.32			
7462A: Sciotoville----	0-8	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	6	48
	8-24	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37	.37			
	24-52	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	52-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	0.0-2.9	0.0-0.5	.37	.49			
7462B: Sciotoville----	0-8	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	6	48
	8-24	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37	.37			
	24-52	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	52-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	0.0-2.9	0.0-0.5	.37	.49			
7462C2: Sciotoville----	0-5	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	6	48
	5-21	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37	.37			
	21-49	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	49-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	0.0-2.9	0.0-0.5	.37	.49			
7462C3: Sciotoville----	0-3	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37	4	6	48
	3-19	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37	.37			
	19-47	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	47-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	0.0-2.9	0.0-0.5	.37	.49			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
7462D2: Sciotoville-----	0-5	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	6	48
	5-21	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37	.37			
	21-49	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	49-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	0.0-2.9	0.0-0.5	.37	.49			
7462D3: Sciotoville-----	0-3	5-35	50-70	15-27	1.30-1.45	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37	3	6	48
	3-19	5-45	30-70	20-35	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	0.0-0.5	.37	.37			
	19-47	5-45	30-70	20-35	1.60-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	47-80	5-70	15-60	15-35	1.50-1.65	2-6	0.10-0.14	0.0-2.9	0.0-0.5	.37	.49			
7463A: Wheeling-----	0-10	5-59	28-80	12-27	1.20-1.40	0.6-6	0.12-0.18	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	10-49	5-59	28-80	12-35	1.30-1.50	0.6-2	0.08-0.16	0.0-2.9	0.0-0.5	.20	.24			
	49-80	70-98	1-15	1-15	1.30-1.50	6-20	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
7463B: Wheeling-----	0-10	5-59	28-80	12-27	1.20-1.40	0.6-6	0.12-0.18	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	10-49	5-59	28-80	12-35	1.30-1.50	0.6-2	0.08-0.16	0.0-2.9	0.0-0.5	.20	.24			
	49-80	70-98	1-15	1-15	1.30-1.50	6-20	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
7463C2: Wheeling-----	0-7	5-59	28-80	12-27	1.20-1.40	0.6-6	0.12-0.18	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	7-46	5-59	28-80	12-35	1.30-1.50	0.6-2	0.08-0.16	0.0-2.9	0.0-0.5	.20	.24			
	46-80	70-98	1-15	1-15	1.30-1.50	6-20	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
7463D3: Wheeling-----	0-5	5-59	28-80	12-27	1.20-1.40	0.6-6	0.12-0.18	0.0-2.9	1.0-3.0	.32	.32	4	5	56
	5-44	5-59	28-80	12-35	1.30-1.50	0.6-2	0.08-0.16	0.0-2.9	0.0-0.5	.20	.24			
	44-80	70-98	1-15	1-15	1.30-1.50	6-20	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
7711A: Hatfield-----	0-14	1-35	50-80	15-27	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	14-36	1-35	45-75	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37			
	36-45	1-50	20-75	22-35	1.60-1.80	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.5	.37	.37			
	45-80	1-50	20-75	15-35	1.60-1.80	0.01-0.06	0.14-0.18	3.0-5.9	0.0-0.5	.49	.49			
7711B: Hatfield-----	0-14	1-35	50-80	15-27	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	14-36	1-35	45-75	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37			
	36-45	1-50	20-75	22-35	1.60-1.80	0.01-0.06	0.06-0.08	0.0-2.9	0.0-0.5	.37	.37			
	45-80	1-50	20-75	15-35	1.60-1.80	0.01-0.06	0.14-0.18	3.0-5.9	0.0-0.5	.49	.49			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8070A: Beaucoup-----	0-16	1-10	55-72	27-35	1.15-1.35	0.6-2	0.15-0.20	3.0-5.9	5.0-6.0	.28	.28	5	7	38
	16-46	1-10	55-72	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-2.0	.32	.32			
	46-80	5-75	15-80	10-30	1.40-1.65	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.32	.32			
8071A: Darwin-----	0-14	0-10	45-55	40-45	1.20-1.40	0.01-0.06	0.11-0.14	9.0-25.0	4.0-5.0	.24	.24	5	4	86
	14-56	0-10	35-55	45-60	1.30-1.50	0.01-0.06	0.11-0.14	9.0-25.0	0.0-2.0	.24	.24			
	56-80	0-10	35-70	30-55	1.40-1.60	0.06-0.2	0.10-0.20	6.0-8.9	0.0-0.5	.24	.24			
8072A: Sharon-----	0-13	1-50	30-79	10-20	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	0.5-3.0	.43	.43	5	5	56
	13-40	1-50	30-79	5-20	1.35-1.65	0.6-2	0.11-0.22	0.0-2.9	0.2-0.5	.49	.49			
	40-80	1-50	30-79	5-20	1.35-1.65	0.6-2	0.11-0.22	0.0-2.9	0.2-0.5	.49	.49			
8085A: Jacob-----	0-4	0-5	25-45	55-70	1.30-1.50	0.06-0.2	0.11-0.13	9.0-25.0	2.0-4.0	.28	.28	5	4	86
	4-50	0-5	20-40	60-75	1.35-1.45	0.01-0.06	0.10-0.13	9.0-25.0	0.0-2.0	.28	.28			
	50-80	0-5	25-45	55-70	1.30-1.45	0.01-0.06	0.10-0.13	9.0-25.0	0.0-1.5	.28	.28			
8092B: Sarpy-----	0-9	70-95	0-28	2-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02	5	2	134
	9-80	70-95	0-28	2-5	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.02	.02			
8108A: Bonnie-----	0-10	1-32	50-80	18-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	10-27	1-32	50-80	18-27	1.40-1.60	0.2-0.6	0.21-0.24	0.0-2.9	0.0-1.0	.49	.49			
	27-80	3-42	40-79	18-30	1.40-1.60	0.2-0.6	0.14-0.24	0.0-2.9	0.0-1.0	.49	.49			
8109A: Raccoon-----	0-6	1-7	68-80	18-27	1.30-1.50	0.2-0.6	0.22-0.24	0.0-2.9	1.0-2.5	.43	.43	3	6	48
	6-30	1-7	68-80	18-27	1.35-1.55	0.2-0.6	0.20-0.22	0.0-2.9	0.2-0.8	.49	.49			
	30-59	1-7	60-70	27-35	1.35-1.60	0.06-0.2	0.15-0.20	3.0-5.9	0.0-0.5	.37	.37			
8162A: Gorham-----	59-80	5-35	45-70	18-30	1.40-1.65	0.2-0.6	0.15-0.20	3.0-5.9	0.0-0.2	.43	.43			
8175B: Lamont-----	0-14	2-15	47-60	27-38	1.30-1.50	0.2-0.6	0.13-0.20	3.0-5.9	4.0-5.0	.28	.28	5	4	86
	14-36	2-15	45-60	27-45	1.35-1.55	0.2-0.6	0.11-0.18	3.0-5.9	0.2-1.0	.28	.28			
	36-54	25-58	20-40	22-35	1.40-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
8175B: Lamont-----	54-80	67-93	2-18	0-15	1.50-1.75	2-20	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
8175B: Lamont-----	0-8	43-85	5-45	5-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	8-23	45-90	5-49	2-19	1.50-1.55	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	23-56	25-80	5-45	5-30	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
8175B: Lamont-----	56-80	35-90	5-45	2-20	1.65-1.75	6-20	0.09-0.11	0.0-2.9	0.0-0.5	.17	.17			

Table 20.—Physical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8178A: Ruark-----	0-18	45-80	5-45	10-27	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.0	.32	.32	5	3	86
	18-37	20-75	5-50	15-35	1.40-1.60	0.2-0.6	0.15-0.19	0.0-2.9	0.1-5.0	.24	.24			
	37-80	45-80	5-45	10-20	1.45-1.65	0.6-2	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24			
8180A: Dupo-----	0-9	0-10	75-90	10-18	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	9-25	0-10	75-90	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	25-80	0-7	33-60	30-60	1.35-1.60	0.06-0.2	0.08-0.19	6.0-8.9	0.2-1.0	.32	.32			
8184A: Roby-----	0-13	50-74	14-38	4-12	1.45-1.65	2-6	0.09-0.13	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	13-16	37-90	1-45	1-18	1.25-1.55	0.6-2	0.09-0.20	0.0-2.9	0.1-0.5	.24	.24			
	16-49	37-80	2-45	10-18	1.40-1.70	0.6-2	0.12-0.19	0.0-2.9	0.1-0.5	.24	.24			
8184B: Roby-----	49-80	40-95	1-45	1-15	1.50-1.85	2-6	0.04-0.17	0.0-2.9	0.1-0.5	.10	.15			
	0-13	50-74	14-38	4-12	1.45-1.65	2-6	0.09-0.13	0.0-2.9	0.5-1.0	.20	.20	5	3	86
	13-16	37-90	1-45	1-18	1.25-1.55	0.6-2	0.09-0.20	0.0-2.9	0.1-0.5	.24	.24			
8284A: Tice-----	16-49	37-80	2-45	10-18	1.40-1.70	0.6-2	0.12-0.19	0.0-2.9	0.1-0.5	.24	.24			
	49-80	40-95	1-45	1-15	1.50-1.85	2-6	0.04-0.17	0.0-2.9	0.1-0.5	.10	.15			
	0-16	0-15	50-70	27-35	1.25-1.45	0.6-2	0.21-0.24	3.0-5.9	2.0-3.0	.32	.32	5	7	38
8288A: Petrolia-----	16-72	0-15	50-70	22-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.32	.32			
	72-80	5-40	45-65	15-30	1.40-1.60	0.6-2	0.20-0.22	3.0-5.9	0.0-1.0	.32	.32			
	0-8	0-19	46-70	27-35	1.20-1.40	0.2-0.6	0.21-0.23	3.0-5.9	2.0-3.0	.32	.32	5	7	38
8331A: Haymond-----	8-55	0-19	46-70	27-35	1.35-1.45	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
	55-80	0-40	40-80	15-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
	0-20	1-35	45-85	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
8333A: Wakeland-----	20-60	1-35	47-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.49	.49			
	60-80	1-65	9-80	2-26	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
	0-8	1-14	68-85	10-18	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	56
8334A: Birds-----	8-68	1-14	68-85	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
	68-80	3-41	49-85	10-18	1.35-1.55	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
	0-22	0-15	60-75	15-25	1.30-1.50	0.2-0.6	0.21-0.25	0.0-2.9	1.0-3.0	.43	.43	5	5	56
8334B: Birds-----	22-80	3-25	55-70	18-27	1.40-1.60	0.2-0.6	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8382A: Belknap-----	0-7	1-27	65-85	8-18	1.30-1.55	0.2-2	0.21-0.25	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-59	1-27	65-85	8-25	1.40-1.60	0.2-2	0.21-0.24	0.0-2.9	0.0-2.0	.49	.49			
	59-80	5-27	49-85	8-30	1.35-1.65	0.2-2	0.14-0.24	0.0-2.9	0.0-1.0	.49	.49			
8420A: Piopolis-----	0-7	0-25	45-73	27-35	1.20-1.40	0.06-0.2	0.21-0.23	3.0-5.9	1.0-3.0	.32	.32	5	7	38
	7-37	0-25	45-73	27-35	1.40-1.60	0.06-0.2	0.18-0.20	3.0-5.9	0.1-2.0	.32	.32			
	37-80	0-30	45-75	25-38	1.50-1.70	0.06-0.2	0.18-0.20	3.0-5.9	0.1-2.0	.32	.32			
8422A: Cape-----	0-10	0-10	40-70	30-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	1.0-3.0	.32	.32	5	7	38
	10-22	0-10	35-60	35-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	22-80	0-15	35-60	35-65	1.30-1.60	0.01-0.06	0.10-0.13	6.0-8.9	0.1-1.0	.28	.28			
8422A+: Cape-----	0-16	0-38	50-80	12-27	1.30-1.50	0.6-2	0.22-0.25	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	16-22	0-10	35-60	35-60	1.30-1.60	0.06-0.2	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
	22-80	0-15	35-60	35-65	1.30-1.60	0.01-0.06	0.10-0.13	6.0-8.9	0.1-1.0	.28	.28			
8426A: Karnak-----	0-5	0-5	30-60	38-65	1.20-1.40	0.06-0.2	0.11-0.14	6.0-8.9	2.0-3.0	.24	.24	5	4	86
	5-50	0-5	30-60	40-65	1.30-1.50	0.01-0.2	0.09-0.13	6.0-8.9	0.0-0.5	.28	.28			
	50-80	0-5	40-60	35-60	1.35-1.55	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28			
8426A+: Karnak-----	0-13	0-30	50-80	20-27	1.20-1.40	0.2-0.6	0.22-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	13-18	0-5	30-60	38-65	1.20-1.40	0.06-0.2	0.11-0.14	6.0-8.9	2.0-3.0	.24	.24			
	18-63	0-5	30-60	38-65	1.30-1.50	0.01-0.2	0.09-0.13	6.0-8.9	0.0-0.5	.28	.28			
	63-80	0-5	40-60	35-60	1.35-1.55	0.06-0.2	0.10-0.18	6.0-8.9	0.0-0.5	.28	.28			
8452A: Riley-----	0-13	1-25	45-70	20-35	1.15-1.35	0.6-2	0.17-0.23	3.0-5.9	3.0-4.0	.28	.28	4	7	38
	13-27	19-65	5-57	24-35	1.25-1.45	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.32	.32			
	27-80	19-90	1-54	2-27	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.10			
8452B: Riley-----	0-13	1-25	45-70	20-35	1.15-1.35	0.6-2	0.17-0.23	3.0-5.9	3.0-4.0	.28	.28	4	7	38
	13-27	19-65	5-57	24-35	1.25-1.45	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.32	.32			
	27-80	19-90	1-54	2-27	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.10			
8456B: Ware-----	0-14	23-85	5-50	5-27	1.40-1.70	0.6-2	0.15-0.18	0.0-2.9	2.0-3.0	.24	.24	5	5	56
	14-21	5-80	5-75	8-32	1.40-1.70	0.6-2	0.20-0.24	0.0-2.9	0.2-0.5	.32	.32			
	21-80	30-82	10-62	8-18	1.60-1.70	2-20	0.07-0.19	0.0-2.9	0.2-0.5	.32	.32			

Table 20.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8475B: Elsah-----	0-10	0-20	55-90	10-25	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.43	.43	3	5	56
	10-32	0-50	40-90	8-18	1.30-1.50	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.49	.55			
	32-80	27-50	32-55	5-18	1.50-1.75	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.24	.32			
8589B: Bowdre-----	0-11	0-19	40-60	35-60	1.40-1.50	0.06-0.2	0.15-0.20	6.0-8.9	1.0-3.0	.24	.24	5	4	86
	11-17	0-19	39-60	35-60	1.40-1.50	0.06-0.2	0.15-0.20	6.0-8.9	0.0-0.5	.32	.32			
	17-23	0-45	45-80	10-25	1.50-1.55	0.2-0.6	0.19-0.22	0.0-2.9	0.0-0.5	.32	.32			
	23-80	30-88	5-50	2-25	1.50-1.55	0.6-2	0.15-0.22	0.0-2.9	0.0-0.5	.24	.24			
8590A: Cairo-----	0-17	0-19	30-60	40-60	1.10-1.40	0.01-0.06	0.10-0.18	6.0-8.9	5.0-7.0	.24	.24	5	4	86
	17-30	0-35	30-60	35-55	1.40-1.65	0.01-0.06	0.08-0.12	6.0-8.9	0.0-2.0	.28	.28			
	30-80	55-90	5-40	5-15	1.50-1.70	6-20	0.08-0.18	0.0-2.9	0.0-0.5	.17	.24			
8597A: Armiesburg-----	0-15	0-30	40-80	20-35	1.30-1.45	0.6-2	0.21-0.23	3.0-5.9	2.0-4.0	.28	.28	5	7	38
	15-67	0-30	40-70	30-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.32	.32			
	67-80	0-30	40-80	20-35	1.30-1.60	0.6-2	0.16-0.20	3.0-5.9	0.2-1.0	.32	.32			
8682B: Medway-----	0-9	0-85	10-60	5-40	1.25-1.50	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28	.28	5	7	38
	9-25	0-50	10-60	18-40	1.20-1.50	0.6-2	0.14-0.18	0.0-2.9	3.0-4.0	.32	.32			
	25-36	5-90	5-65	5-30	1.20-1.60	0.6-6	0.11-0.15	0.0-2.9	0.0-0.5	.24	.24			
	36-80	10-90	5-60	5-30	1.20-1.60	0.6-6	0.08-0.15	0.0-2.9	0.0-0.5	.02	.24			
MW. Miscellaneous water														
W. Water														

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
75C: Drury-----	0-6	5.6-7.8	1.0-2.0	8.0-16	---	0
	6-33	5.6-7.3	0.0-0.2	11-15	---	0
	33-80	6.1-7.8	0.0-0.2	9.0-12	---	0-15
75C3: Drury-----	0-1	5.6-7.8	0.5-1.0	8.0-16	---	0
	1-28	5.6-7.3	0.0-0.2	11-15	---	0
	28-80	6.1-7.8	0.0-0.2	9.0-12	---	0-15
75D: Drury-----	0-6	5.6-7.8	1.0-2.0	8.0-16	---	0
	6-33	5.6-7.3	0.0-0.2	11-15	---	0
	33-80	6.1-7.8	0.0-0.2	9.0-12	---	0-15
79B: Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79C: Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79C2: Menfro-----	0-7	5.1-7.3	0.5-2.0	10-16	---	0
	7-59	4.5-7.3	0.0-0.5	15-20	11-15	0
	59-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79C3: Menfro-----	0-5	5.1-7.3	0.5-1.0	10-16	---	0
	5-57	4.5-7.3	0.0-0.5	15-20	11-15	0
	57-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79D: Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79D2: Menfro-----	0-7	5.1-7.3	0.5-2.0	10-16	---	0
	7-59	4.5-7.3	0.0-0.5	15-20	11-15	0
	59-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79D3: Menfro-----	0-5	5.1-7.3	0.5-1.0	10-16	---	0
	5-57	4.5-7.3	0.0-0.5	15-20	11-15	0
	57-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79E: Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
79E2: Menfro-----	0-7	5.1-7.3	0.5-2.0	10-16	---	0
	7-59	4.5-7.3	0.0-0.5	15-20	11-15	0
	59-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79E3: Menfro-----	0-5	5.1-7.3	0.5-1.0	10-16	---	0
	5-57	4.5-7.3	0.0-0.5	15-20	11-15	0
	57-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
79F: Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
164B: Stoy-----	0-13	4.5-7.3	1.0-2.0	14-20	---	0
	13-32	4.5-5.5	0.2-1.0	16-22	12-17	0
	32-45	4.5-5.5	0.2-0.5	16-22	12-17	0
	45-80	4.5-6.0	0.2-0.5	12-17	9.0-13	0
175A: Lamont-----	0-11	5.1-7.3	0.5-1.0	10-15	---	0
	11-17	5.1-7.3	0.0-0.5	10-15	---	0
	17-27	5.1-6.5	0.0-0.5	10-15	---	0
	27-80	5.1-7.3	0.0-0.5	5.0-10	---	0
175B: Lamont-----	0-11	5.1-7.3	0.5-1.0	10-15	---	0
	11-17	5.1-7.3	0.0-0.5	10-15	---	0
	17-27	5.1-6.5	0.0-0.5	10-15	---	0
	27-80	5.1-7.3	0.0-0.5	5.0-10	---	0
175C: Lamont-----	0-11	5.1-7.3	0.5-1.0	10-15	---	0
	11-17	5.1-7.3	0.0-0.5	10-15	---	0
	17-27	5.1-6.5	0.0-0.5	10-15	---	0
	27-80	5.1-7.3	0.0-0.5	5.0-10	---	0
214B: Hosmer-----	0-7	4.5-7.3	1.0-2.0	12-20	6.0-15	0
	7-28	4.5-5.5	0.2-1.0	12-23	8.0-15	0
	28-67	4.5-6.0	0.0-0.2	9.0-21	7.0-14	0
	67-80	4.5-6.5	0.0-0.2	9.0-16	7.0-11	0
214C: Hosmer-----	0-7	4.5-7.3	1.0-2.0	9.0-20	6.0-14	0
	7-28	4.5-5.5	0.2-1.0	12-23	8.0-15	0
	28-67	4.5-6.0	0.0-0.2	9.0-21	6.0-14	0
	67-80	4.5-6.5	0.0-0.2	9.0-16	6.0-11	0
214C2: Hosmer-----	0-4	4.5-7.3	1.0-2.0	9.0-20	6.0-14	0
	4-25	4.5-5.5	0.2-1.0	12-23	8.0-15	0
	25-64	4.5-6.0	0.0-0.2	9.0-21	6.0-14	0
	64-80	4.5-6.5	0.0-0.2	9.0-16	6.0-11	0

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
214C3: Hosmer-----	0-2	4.5-7.3	0.5-1.0	9.0-20	6.0-14	0
	2-23	4.5-5.5	0.2-1.0	12-23	8.0-15	0
	23-62	4.5-6.0	0.0-0.2	9.0-21	7.0-14	0
	62-80	4.5-6.5	0.0-0.2	9.0-16	7.0-11	0
214D2: Hosmer-----	0-4	4.5-7.3	1.0-2.0	9.0-20	6.0-14	0
	4-25	4.5-5.5	0.2-1.0	12-23	8.0-15	0
	25-64	4.5-6.0	0.0-0.2	9.0-21	7.0-14	0
	64-80	4.5-6.5	0.0-0.2	9.0-16	7.0-11	0
214D3: Hosmer-----	0-2	4.5-7.3	0.5-1.0	9.0-20	6.0-14	0
	2-23	4.5-5.5	0.2-1.0	12-23	8.0-15	0
	23-62	4.5-6.0	0.0-0.2	9.0-21	7.0-14	0
	62-80	4.5-6.5	0.0-0.2	9.0-16	7.0-11	0
216D: Stookey-----	0-6	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	6-62	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	62-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
216D2: Stookey-----	0-3	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	3-59	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	59-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
216E: Stookey-----	0-6	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	6-62	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	62-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
216E2: Stookey-----	0-3	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	3-59	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	59-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
216E3: Stookey-----	0-1	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	1-57	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	57-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
216F: Stookey-----	0-6	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	6-62	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	62-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
216G: Stookey-----	0-6	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	6-62	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	62-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
471F: Clarksville----	0-16	3.6-6.0	0.5-2.0	3.0-18	2.0-14	0
	16-26	3.6-5.5	0.2-0.5	---	10-14	0
	26-80	3.6-5.5	0.1-0.4	---	12-20	0

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Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
471G: Clarksville-----	0-16	3.6-6.0	0.5-2.0	3.0-18	2.0-14	0
	16-26	3.6-5.5	0.2-0.5	---	10-14	0
	26-80	3.6-5.5	0.1-0.4	---	12-20	0
477B: Winfield-----	0-9	5.6-7.3	0.5-2.0	10-16	---	0
	9-13	5.6-7.3	0.5-1.0	10-16	---	0
	13-56	4.5-6.5	0.0-0.5	15-21	11-16	0
	56-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477C: Winfield-----	0-9	5.6-7.3	0.5-2.0	10-16	---	0
	9-13	5.6-7.3	0.5-1.0	10-16	---	0
	13-56	4.5-6.5	0.0-0.5	15-21	11-16	0
	56-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477C2: Winfield-----	0-6	5.6-7.3	0.5-2.0	10-16	---	0
	6-10	5.6-7.3	0.5-1.0	10-16	---	0
	10-53	4.5-6.5	0.0-0.5	5.0-21	11-16	0
	53-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477C3: Winfield-----	0-4	5.6-7.3	0.5-1.0	10-16	---	0
	4-8	5.6-7.3	0.5-1.0	10-16	---	0
	8-51	4.5-6.5	0.0-0.5	15-21	11-16	0
	51-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477D2: Winfield-----	0-6	5.6-7.3	0.5-2.0	10-16	---	0
	6-10	5.6-7.3	0.5-1.0	10-16	---	0
	10-53	4.5-6.5	0.0-0.5	15-21	11-16	0
	53-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477D3: Winfield-----	0-4	5.6-7.3	0.5-1.0	10-16	---	0
	4-8	5.6-7.3	0.5-1.0	10-16	---	0
	8-51	4.5-6.5	0.0-0.5	15-21	11-16	0
	51-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477E3: Winfield-----	0-4	5.6-7.3	0.5-1.0	10-16	---	0
	4-8	5.6-7.3	0.5-1.0	10-16	---	0
	8-51	4.5-6.5	0.0-0.5	15-21	11-16	0
	51-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
477F: Winfield-----	0-9	5.6-7.3	0.5-2.0	10-16	---	0
	9-13	5.6-7.3	0.5-1.0	10-16	---	0
	13-56	4.5-6.5	0.0-0.5	15-21	11-16	0
	56-80	5.1-7.3	0.0-0.5	5.0-10	4.0-8.0	0
717F: Stookey-----	0-6	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	6-62	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	62-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5

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Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
717F:						
Clarksville-----	0-16	3.6-6.0	0.5-2.0	3.0-18	2.0-14	0
	16-26	3.6-5.5	0.2-0.5	---	10-14	0
	26-80	3.6-5.5	0.1-0.4	---	12-20	0
717G:						
Clarksville-----	0-16	3.6-6.0	0.5-2.0	3.0-18	2.0-14	0
	16-26	3.6-5.5	0.2-0.5	---	10-14	0
	26-80	3.6-5.5	0.1-0.4	---	12-20	0
Stookey-----	0-6	4.5-7.3	0.5-1.0	10-16	8.0-12	0
	6-62	4.5-6.5	0.0-0.5	12-18	9.0-14	0
	62-80	5.6-8.4	0.0-0.5	8.0-16	---	0-5
801B:						
Orthents-----	0-80	5.1-6.5	0.0-1.0	3.0-23	---	0
802D:						
Orthents-----	0-6	5.6-7.3	0.1-1.0	7.0-18	---	0
	6-80	5.6-7.3	0.0-1.0	7.0-20	---	0
832F:						
Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
Clarksville-----	0-16	3.6-6.0	0.5-2.0	3.0-18	2.0-14	0
	16-26	3.6-5.5	0.2-0.5	---	10-14	0
	26-80	3.6-5.5	0.1-0.4	---	12-20	0
832G:						
Clarksville-----	0-16	3.6-6.0	0.5-2.0	3.0-18	2.0-14	0
	16-26	3.6-5.5	0.2-0.5	---	10-14	0
	26-80	3.6-5.5	0.1-0.4	---	12-20	0
Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.5	5.0-10	4.0-8.0	0
833F:						
Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.2	5.0-10	4.0-8.0	0
Goss-----	0-7	4.5-6.5	0.5-2.0	6.0-15	4.5-11	0
	7-22	4.5-6.0	0.0-0.1	6.0-24	4.5-18	0
	22-80	4.5-6.0	0.0-0.5	21-49	16-37	0
833G:						
Goss-----	0-7	4.5-6.5	0.5-2.0	6.0-15	4.5-11	0
	7-22	4.5-6.0	0.0-0.1	6.0-24	4.5-18	0
	22-80	4.5-6.0	0.0-0.5	21-49	16-37	0
Menfro-----	0-10	5.1-7.3	0.5-2.0	10-16	---	0
	10-62	4.5-7.3	0.0-0.5	15-20	11-15	0
	62-80	4.5-7.3	0.0-0.2	5.0-10	4.0-8.0	0
864. Pits, quarries						

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
865. Pits, gravel						
1426A: Karnak-----	0-5	5.6-6.5	2.0-3.0	28-42	---	0
	5-50	5.6-7.3	0.0-0.5	24-37	---	0
	50-80	5.6-7.8	0.0-0.5	21-37	---	0
1843A: Bonnie-----	0-10	4.5-7.3	1.0-3.0	13-20	---	0
	10-27	4.5-5.5	0.0-1.0	---	8.0-13	0
	27-80	4.5-7.8	0.0-1.0	11-16	8.0-13	0
Petrolia-----	0-8	5.6-7.8	2.0-3.0	20-25	---	0
	8-55	5.6-7.3	0.2-1.0	15-22	---	0
	55-80	5.1-7.8	0.2-1.0	10-20	---	0
1845A: Darwin-----	0-14	6.1-7.8	4.0-5.0	32-37	---	0
	14-56	6.1-7.8	0.0-2.0	27-40	---	0
	56-80	6.6-8.4	0.0-0.5	18-34	---	0-10
Jacob-----	0-4	5.1-6.5	2.0-4.0	35-45	---	0
	4-50	3.6-5.5	0.0-2.0	---	35-45	0
	50-80	5.1-6.5	0.0-1.5	---	35-45	0
1846A: Karnak-----	0-5	5.6-6.0	2.0-3.0	28-42	---	0
	5-50	5.6-7.3	0.0-0.5	24-37	---	0
	50-80	5.6-7.8	0.0-0.5	21-37	---	0
Cape-----	0-10	4.5-7.3	1.0-3.0	20-30	15-22	0
	10-22	3.6-5.5	0.5-2.0	---	24-40	0
	22-80	3.6-5.5	0.1-1.0	---	21-40	0
3070L: Beaucoup-----	0-16	5.6-7.8	5.0-6.0	26-33	---	0
	16-46	5.6-7.8	0.0-2.0	16-25	---	0-5
	46-80	6.1-8.4	0.0-1.0	6.0-20	---	0-15
3071A: Darwin-----	0-14	6.1-7.8	4.0-5.0	32-37	---	0
	14-56	6.1-7.8	0.0-2.0	27-40	---	0
	56-80	6.6-8.4	0.0-0.5	18-34	---	0-10
3071L: Darwin-----	0-14	6.1-7.8	4.0-5.0	32-37	---	0
	14-56	6.1-7.8	0.0-2.0	27-40	---	0
	56-80	6.6-8.4	0.0-0.5	18-34	---	0-10
3092BL: Sarpy-----	0-9	6.6-7.8	0.5-1.0	2.0-8.0	---	0-2
	9-80	6.6-7.8	0.0-0.5	2.0-8.0	---	0-2
3108A: Bonnie-----	0-10	4.5-7.3	1.0-3.0	13-20	---	0
	10-27	4.5-5.5	0.0-1.0	---	8.0-13	0
	27-80	4.5-7.8	0.0-1.0	11-16	8.0-13	0

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
3162L: Gorham-----	0-14	5.1-7.8	4.0-5.0	24-35	---	0
	14-36	6.1-7.8	0.2-1.0	16-26	---	0
	36-54	6.1-7.8	0.0-0.5	13-20	---	0
	54-80	6.1-7.8	0.0-0.5	3.0-10	---	0-10
3180L: Dupo-----	0-9	5.6-7.8	1.0-2.0	8.0-15	---	0
	9-25	5.6-7.8	0.0-0.5	6.0-12	---	0
	25-80	6.6-7.8	0.2-1.0	21-35	---	0-10
3284L: Tice-----	0-16	6.1-7.8	2.0-3.0	20-27	---	0
	16-72	5.6-7.8	0.0-1.0	16-23	---	0
	72-80	5.6-7.8	0.0-1.0	9.0-20	---	0-10
3288L: Petrolia-----	0-8	5.6-7.8	2.0-3.0	20-25	---	0
	8-55	5.6-7.3	0.2-1.0	15-22	---	0
	55-80	5.1-7.8	0.2-1.0	10-20	---	0
3331A: Haymond-----	0-20	5.6-7.8	1.0-3.0	7.0-20	---	0
	20-60	5.6-7.8	0.5-2.0	5.0-12	---	0
	60-80	6.1-7.8	0.0-1.0	3.0-16	---	0
3331L: Haymond-----	0-20	5.6-7.8	1.0-3.0	7.0-20	---	0
	20-60	5.6-7.8	0.5-2.0	5.0-12	---	0
	60-80	6.1-7.8	0.0-1.0	3.0-16	---	0
3333A: Wakeland-----	0-8	5.6-7.8	1.0-3.0	7.0-20	---	0
	8-68	5.6-7.8	0.0-1.0	5.0-15	---	0
	68-80	5.6-7.8	0.0-0.5	5.0-15	---	0
3333L: Wakeland-----	0-8	5.6-7.3	1.0-3.0	7.0-20	---	0
	8-68	5.6-7.8	0.0-1.0	5.0-15	---	0
	68-80	5.6-7.8	0.0-0.5	5.0-15	---	0
3334A: Birds-----	0-22	5.6-7.8	1.0-3.0	11-21	---	0
	22-80	5.1-7.8	0.0-2.0	11-20	---	0
3334L: Birds-----	0-22	5.6-7.8	1.0-3.0	11-21	---	0
	22-80	5.1-7.8	0.0-2.0	11-20	---	0
3382A: Belknap-----	0-7	4.5-7.3	1.0-3.0	7.0-17	---	0
	7-59	4.5-5.5	0.0-2.0	---	4.0-14	0
	59-80	4.5-7.3	0.0-1.0	5.0-20	2.0-15	0
3420A: Piopolis-----	0-7	5.1-7.3	1.0-3.0	20-25	15-19	0
	7-37	4.5-5.5	0.1-2.0	15-20	11-16	0
	37-80	5.1-7.3	0.1-2.0	10-20	8.0-16	0

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
3422A:						
Cape-----	0-10	4.5-7.3	1.0-3.0	20-30	15-22	0
	10-22	3.6-5.5	0.5-2.0	---	24-40	0
	22-80	3.6-5.5	0.1-1.0	---	21-40	0
3422A+:						
Cape-----	0-16	4.5-7.3	1.0-3.0	13-24	9.8-18	0
	16-22	3.6-5.5	0.5-2.0	---	24-40	0
	22-80	3.6-5.5	0.1-1.0	---	21-40	0
3426L:						
Karnak-----	0-5	5.6-6.5	2.0-3.0	28-42	---	0
	5-50	5.6-7.3	0.0-0.5	24-37	---	0
	50-80	5.6-7.8	0.0-0.5	21-37	---	0
3449L:						
Armiesburg-----	0-15	6.1-7.8	2.0-4.0	14-29	---	0
	15-67	6.1-7.8	0.5-1.0	15-23	---	0-5
	67-80	6.1-7.8	0.2-1.0	10-23	---	0-10
Sarpy-----	0-9	6.6-7.8	0.5-1.0	2.0-8.0	---	0-2
	9-80	6.6-7.8	0.0-0.5	2.0-8.0	---	0-2
3452L:						
Riley-----	0-13	5.6-7.8	3.0-4.0	21-29	---	0
	13-27	5.6-7.8	0.5-2.0	10-25	---	0
	27-80	5.6-8.4	0.0-1.0	1.0-10	---	0-15
3456B:						
Ware-----	0-14	5.6-8.4	2.0-3.0	5-15	---	0
	14-21	5.6-8.4	0.2-0.5	9.0-14	---	0
	21-80	6.1-7.8	0.2-0.5	5.0-12	---	0-5
3456BL:						
Ware-----	0-14	5.6-8.4	2.0-3.0	5-15	---	0
	14-21	5.6-8.4	0.2-0.5	9.0-14	---	0
	21-80	6.1-7.8	0.2-0.5	5.0-12	---	0-5
3590L:						
Cairo-----	0-17	6.1-7.8	5.0-7.0	34-50	---	0
	17-30	6.1-7.8	0.0-2.0	24-37	---	0
	30-80	6.1-7.8	0.0-0.5	3.0-10	---	0-5
3597L:						
Armiesburg-----	0-15	6.1-7.8	2.0-4.0	14-29	---	0
	15-67	6.1-7.8	0.5-1.0	15-23	---	0-5
	67-80	6.1-7.8	0.2-1.0	10-23	---	0-10
3682BL:						
Medway-----	0-9	6.1-7.8	3.0-6.0	16-36	---	0
	9-25	6.1-8.4	3.0-4.0	16-32	---	0
	25-36	6.1-8.4	0.0-0.5	3.0-19	---	0-10
	36-80	6.1-8.4	0.0-0.5	3.0-19	---	0-10
7084A:						
Okaw-----	0-7	4.5-7.3	1.0-3.0	11-22	---	0
	7-15	4.5-6.5	0.5-1.0	11-22	8.0-16	0
	15-54	3.6-7.3	0.0-0.5	22-38	16-28	0
	54-80	4.5-8.4	0.0-0.5	21-35	16-26	0-10

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
7122B: Colp-----	0-8	5.1-7.3	1.0-2.0	14-20	---	0
	8-12	5.1-7.3	0.0-1.0	14-20	---	0
	12-70	4.5-7.8	0.0-0.5	28-41	---	0
	70-80	4.5-8.4	0.0-0.5	18-28	---	0-15
7122C2: Colp-----	0-8	5.1-7.8	1.0-2.0	14-20	---	0
	8-70	4.5-7.8	0.0-0.5	28-41	21-31	0
	70-80	4.5-8.4	0.0-0.5	18-28	14-21	0-15
7131A: Alvin-----	0-10	4.5-7.3	0.5-1.0	7.0-11	5.0-8.0	0
	10-16	4.5-7.3	0.0-0.5	6.0-10	5.0-7.0	0
	16-42	4.5-7.3	0.0-0.5	9.0-14	6.0-10	0
	42-80	5.1-8.4	0.0-0.3	2.0-5.0	1.0-4.0	0-5
7131B: Alvin-----	0-10	4.5-7.3	0.5-1.0	7.0-11	5.0-8.0	0
	10-16	4.5-7.3	0.0-0.5	6.0-10	5.0-7.0	0
	16-42	4.5-7.3	0.0-0.5	9.0-14	6.0-10	0
	42-80	5.1-8.4	0.0-0.3	2.0-5.0	1.0-4.0	0-5
7131C: Alvin-----	0-10	4.5-7.3	0.5-1.0	7.0-11	5.0-8.0	0
	10-16	4.5-7.3	0.0-0.5	6.0-10	5.0-7.0	0
	16-42	4.5-7.3	0.0-0.5	9.0-14	6.0-10	0
	42-80	5.1-8.4	0.0-0.3	2.0-5.0	1.0-4.0	0-5
7131C2: Alvin-----	0-7	4.5-7.3	0.5-1.0	7.0-11	5.0-8.0	0
	7-13	4.5-7.3	0.0-0.5	6.0-10	5.0-7.0	0
	13-39	4.5-7.3	0.0-0.5	9.0-14	6.0-10	0
	39-80	5.1-8.4	0.0-0.3	2.0-5.0	1.0-4.0	0-5
7131D2: Alvin-----	0-7	4.5-7.3	0.5-1.0	7.0-11	5.0-8.0	0
	7-13	4.5-7.3	0.0-0.5	6.0-10	5.0-7.0	0
	13-39	4.5-7.3	0.0-0.5	9.0-14	6.0-10	0
	39-80	5.1-8.4	0.0-0.3	2.0-5.0	1.0-4.0	0-5
7338A: Hurst-----	0-7	5.1-7.3	1.0-2.0	14-20	---	0
	7-12	3.5-6.0	0.0-0.5	11-19	8.0-14	0
	12-62	3.5-7.8	0.0-0.5	21-29	16-22	0
	62-80	5.1-8.4	0.0-0.5	12-27	9.0-20	0-5
7338B: Hurst-----	0-7	5.1-7.3	1.0-2.0	14-20	---	0
	7-12	3.5-6.0	0.0-0.5	11-19	8.0-14	0
	12-62	3.5-7.8	0.0-0.5	21-29	16-22	0
	62-80	4.5-8.4	0.0-0.5	12-27	9.0-20	0-5
7401A: Okaw-----	0-10	4.5-7.3	1.0-3.0	11-22	---	0
	10-18	4.5-6.5	0.5-1.0	11-22	8.0-16	0
	18-57	3.6-7.3	0.0-0.5	22-38	16-28	0
	57-80	4.5-8.4	0.0-0.5	21-35	16-26	0-10

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
7460A: Ginat-----	0-19	4.5-7.3	1.0-3.0	10-22	---	0
	19-34	4.5-6.0	0.0-0.5	---	10-22	0
	34-49	4.5-5.5	0.0-0.5	---	10-21	0
	49-80	4.5-7.8	0.0-0.5	---	10-21	0
7462A: Sciotoville-----	0-8	5.1-6.5	1.0-3.0	10-15	---	0
	8-24	4.5-5.5	0.0-0.5	---	9.0-14	0
	24-52	4.5-6.0	0.0-0.5	12-19	9.0-14	0
	52-80	5.1-6.5	0.0-0.5	9.0-19	6.0-16	0
7462B: Sciotoville-----	0-8	5.1-6.5	1.0-3.0	10-15	---	0
	8-24	4.5-5.5	0.0-0.5	---	9.0-14	0
	24-52	4.5-6.0	0.0-0.5	12-19	9.0-14	0
	52-80	5.1-6.5	0.0-0.5	9.0-19	6.0-16	0
7462C2: Sciotoville-----	0-5	5.1-6.5	1.0-3.0	10-15	---	0
	5-21	4.5-5.5	0.0-0.5	---	9.0-14	0
	21-49	4.5-6.0	0.0-0.5	12-19	9.0-14	0
	49-80	5.1-6.5	0.0-0.5	9.0-19	6.0-16	0
7462C3: Sciotoville-----	0-3	5.1-6.5	0.5-1.0	10-15	---	0
	3-19	4.5-5.5	0.0-0.5	---	9.0-14	0
	19-47	4.5-6.0	0.0-0.5	12-19	9.0-14	0
	47-80	5.1-6.5	0.0-0.5	9.0-19	6.0-16	0
7462D2: Sciotoville-----	0-5	5.1-6.5	1.0-3.0	10-15	---	0
	5-21	4.5-5.5	0.0-0.5	---	9.0-14	0
	21-49	4.5-6.0	0.0-0.5	12-19	9.0-14	0
	49-80	5.1-6.5	0.0-0.5	9.0-19	6.0-16	0
7462D3: Sciotoville-----	0-3	5.1-6.5	0.5-1.0	10-15	---	0
	3-19	4.5-5.5	0.0-0.5	---	9.0-14	0
	19-47	4.5-6.0	0.0-0.5	12-19	9.0-14	0
	47-80	5.1-6.5	0.0-0.5	12-19	6.0-16	0
7463A: Wheeling-----	0-10	5.1-6.5	1.0-3.0	6.0-15	---	0
	10-49	5.1-6.0	0.0-0.5	9.0-21	---	0
	49-80	5.1-6.0	0.0-0.5	1.0-8.0	---	0
7463B: Wheeling-----	0-10	5.1-6.5	1.0-3.0	6.0-15	---	0
	10-49	5.1-6.0	0.0-0.5	9.0-21	---	0
	49-80	5.1-6.0	0.0-0.5	1.0-8.0	---	0
7463C2: Wheeling-----	0-7	5.1-6.5	1.0-3.0	6.0-15	---	0
	7-46	5.1-6.0	0.0-0.5	9.0-21	---	0
	46-80	5.1-6.0	0.0-0.5	1.0-8.0	---	0

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
7463D3: Wheeling-----	0-5	5.1-6.5	0.5-1.0	6.0-15	---	0
	5-44	5.1-6.0	0.0-0.5	9.0-21	---	0
	44-80	5.1-6.0	0.0-0.5	1.0-8.0	---	0
7711A: Hatfield-----	0-14	4.5-7.3	1.0-3.0	10-15	7.0-11	0
	14-36	4.5-6.0	0.5-2.0	---	9.0-14	0
	36-45	4.5-6.5	0.0-0.5	---	10-16	0
	45-80	5.1-7.8	0.0-0.5	9.0-20	7.0-15	0
7711B: Hatfield-----	0-14	4.5-7.3	1.0-3.0	10-15	7.0-11	0
	14-36	4.5-6.0	0.5-2.0	---	9.0-14	0
	36-45	4.5-6.5	0.0-0.5	---	10-16	0
	45-80	5.1-7.8	0.0-0.5	9.0-20	7.0-15	0
8070A: Beaucoup-----	0-16	5.6-7.8	5.0-6.0	26-33	---	0
	16-46	5.6-7.8	0.0-2.0	16-25	---	0-5
	46-80	6.1-8.4	0.0-1.0	6.0-20	---	0-15
8071A: Darwin-----	0-14	6.1-7.8	4.0-5.0	32-37	---	0
	14-56	6.1-7.8	0.0-2.0	27-40	---	0
	56-80	6.6-8.4	0.0-0.5	18-34	---	0-10
8072A: Sharon-----	0-13	4.5-7.3	2.0-3.0	7.0-20	5.0-15	0
	13-40	4.5-7.3	0.0-1.0	3.0-10	2.0-8.0	0
	40-80	4.5-7.3	0.0-1.0	3.0-10	2.0-8.0	0
8085A: Jacob-----	0-4	5.1-6.5	2.0-4.0	35-45	---	0
	4-50	3.6-5.5	0.0-2.0	---	35-45	0
	50-80	5.1-6.5	0.0-1.5	---	35-45	0
8092B: Sarpy-----	0-9	6.6-7.8	0.5-1.0	2.0-8.0	---	0-2
	9-80	6.6-7.8	0.0-0.5	2.0-8.0	---	0-2
8108A: Bonnie-----	0-10	4.5-7.3	1.0-3.0	13-20	---	0
	10-27	4.5-5.5	0.0-1.0	---	8.0-13	0
	27-80	4.5-7.8	0.0-1.0	11-16	8.0-13	0
8109A: Raccoon-----	0-6	4.5-7.3	1.0-2.5	13-20	---	0
	6-30	4.5-7.3	0.2-0.8	11-17	---	0
	30-59	4.5-5.5	0.1-0.5	---	17-26	0
	59-80	4.5-7.3	0.0-0.2	16-31	12-22	0
8162A: Gorham-----	0-14	5.1-7.8	4.0-5.0	24-35	---	0
	14-36	6.1-7.8	0.2-1.0	16-26	---	0
	36-54	6.1-7.8	0.0-0.5	13-20	---	0
	54-80	6.1-7.8	0.0-0.5	3.0-10	---	0-10

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
8175B:						
Lamont-----	0-8	5.1-7.3	0.5-1.0	10-15	---	0
	8-23	5.1-7.3	0.0-0.5	10-15	---	0
	23-56	5.1-6.5	0.0-0.5	10-15	---	0
	56-80	5.1-7.3	0.0-0.5	5.0-10	---	0
8178A:						
Ruark-----	0-18	4.5-7.3	0.5-2.0	4.0-15	---	0
	18-37	4.5-6.0	0.1-5.0	8.0-18	6.0-14	0
	37-80	5.6-7.8	0.0-0.5	3.0-7.0	---	0
8180A:						
Dupo-----	0-9	5.6-7.8	1.0-2.0	8.0-15	---	0
	9-25	5.6-7.8	0.0-0.5	6.0-12	---	0
	25-80	6.6-7.8	0.2-1.0	21-35	---	0-10
8184A:						
Roby-----	0-13	4.5-7.3	0.5-1.0	4.0-11	---	0
	13-16	4.5-6.5	0.1-0.5	2.0-10	1.0-8.0	0
	16-49	5.6-7.3	0.1-0.5	6.0-12	---	0
	49-80	5.6-7.8	0.1-0.5	2.0-10	---	0
8184B:						
Roby-----	0-13	4.5-7.3	0.5-1.0	4.0-11	---	0
	13-16	4.5-6.5	0.1-0.5	2.0-10	1.0-8.0	0
	16-49	5.6-7.3	0.1-0.5	6.0-12	---	0
	49-80	5.6-7.8	0.1-0.5	2.0-10	---	0
8284A:						
Tice-----	0-16	6.1-7.8	2.0-3.0	20-27	---	0
	16-72	5.6-7.8	0.0-1.0	16-23	---	0
	72-80	5.6-7.8	0.0-1.0	9.0-20	---	0-10
8288A:						
Petrolia-----	0-8	5.6-7.8	2.0-3.0	20-25	---	0
	8-55	5.6-7.3	0.2-1.0	15-22	---	0
	55-80	5.1-7.8	0.2-1.0	10-20	---	0
8331A:						
Haymond-----	0-20	5.6-7.8	1.0-3.0	7.0-20	---	0
	20-60	5.6-7.8	0.5-2.0	5.0-12	---	0
	60-80	6.1-7.8	0.0-1.0	3.0-16	---	0
8333A:						
Wakeland-----	0-8	5.6-7.3	1.0-3.0	7.0-20	---	0
	8-68	5.6-7.8	0.0-1.0	5.0-15	---	0
	68-80	5.6-7.8	0.0-0.5	5.0-15	---	0
8334A:						
Birds-----	0-22	5.6-7.8	1.0-3.0	11-21	---	0
	22-80	5.1-7.8	0.0-2.0	11-20	---	0
8382A:						
Belknap-----	0-7	4.5-7.3	1.0-3.0	7.0-17	---	0
	7-59	4.5-5.5	0.0-2.0	---	4.0-14	0
	59-80	4.5-7.3	0.0-1.0	5.0-20	2.0-15	0

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	In	pH	Pct	meq/100 g	meq/100 g	Pct
8420A: Piopolis-----	0-7	5.1-6.5	1.0-3.0	20-25	15-19	0
	7-37	4.5-5.5	0.1-2.0	15-20	13-20	0
	37-80	5.1-7.3	0.1-2.0	10-20	8.0-16	0
8422A: Cape-----	0-10	4.5-7.3	1.0-3.0	20-30	15-22	0
	10-22	3.6-5.5	0.5-2.0	---	24-40	0
	22-80	3.6-5.5	0.1-1.0	---	21-40	0
8422A+: Cape-----	0-16	4.5-7.3	1.0-3.0	13-24	10-18	0
	16-22	3.6-5.5	0.5-2.0	---	24-40	0
	22-80	3.6-5.5	0.1-1.0	---	21-40	0
8426A: Karnak-----	0-5	5.6-6.5	2.0-3.0	28-42	---	0
	5-50	5.6-7.3	0.0-0.5	24-37	---	0
	50-80	5.6-7.8	0.0-0.5	21-37	---	0
8426A+: Karnak-----	0-13	5.6-7.3	1.0-3.0	14-21	---	0
	13-18	5.6-6.5	2.0-3.0	28-42	---	0
	18-63	5.6-7.3	0.0-0.5	24-37	---	0
	63-80	5.6-7.8	0.0-0.5	21-37	---	0
8452A: Riley-----	0-13	5.6-7.8	3.0-4.0	21-29	---	0
	13-27	5.6-7.8	0.5-2.0	10-25	---	0
	27-80	5.6-8.4	0.0-1.0	1.0-10	---	0-15
8452B: Riley-----	0-13	5.6-7.8	3.0-4.0	21-29	---	0
	13-27	5.6-7.8	0.5-2.0	10-25	---	0
	27-80	5.6-8.4	0.0-1.0	1.0-10	---	0-15
8456B: Ware-----	0-14	5.6-8.4	2.0-3.0	5-15	---	0
	14-21	5.6-8.4	0.2-0.5	9.0-14	---	0
	21-80	6.1-7.8	0.2-0.5	5.0-12	---	0-5
8475B: Elsah-----	0-10	5.6-7.3	1.0-2.0	11-19	---	0
	10-32	5.6-7.3	0.0-0.5	5.0-12	---	0
	32-80	5.6-7.3	0.0-0.5	3.0-12	---	0
8589B: Bowdre-----	0-11	5.6-7.3	1.0-3.0	23-42	---	0
	11-17	5.6-7.3	0.0-0.5	23-42	---	0
	17-23	6.1-8.4	0.0-0.5	6.0-15	---	0
	23-80	6.1-8.4	0.0-0.5	3.0-15	---	0-5
8590A: Cairo-----	0-17	6.1-7.8	5.0-7.0	34-50	---	0
	17-30	6.1-7.8	0.0-2.0	24-37	---	0
	30-80	6.1-7.8	0.0-0.5	3.0-10	---	0-5

Soil Survey of Alexander County, Illinois

Table 21.—Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Soil reaction	Organic matter	Cation- exchange capacity	Effective cation- exchange capacity	Calcium carbonate equivalent
	<u>In</u>	<u>pH</u>	<u>Pct</u>	<u>meq/100 g</u>	<u>meq/100 g</u>	<u>Pct</u>
8597A:						
Armiesburg-----	0-15	6.1-7.8	2.0-4.0	14-29	---	0
	15-67	6.1-7.8	0.5-1.0	15-23	---	0-5
	67-80	6.1-7.8	0.2-1.0	10-23	---	0-10
8682B:						
Medway-----	0-9	6.1-7.8	3.0-6.0	16-36	---	0
	9-25	6.1-8.4	3.0-4.0	16-32	---	0
	25-36	6.1-8.4	0.0-0.5	3.0-19	---	0-10
	36-80	6.1-8.4	0.0-0.5	3.0-19	---	0-10
MW. Miscellaneous water						
W. Water						

Table 22.—Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Water table depth		
		Surface water depth	Duration	Frequency	Duration	Frequency	Month	Upper limit	Lower limit	Water table kind
		<u>Ft</u>						<u>Ft</u>	<u>Ft</u>	
75C: Drury-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
75C3: Drury-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
75D: Drury-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79B: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79C: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79C2: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79C3: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79D: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79D2: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79D3: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79E: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79E2: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79E3: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---
79F: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding		Flooding		Month	Water table depth		Water table kind
		Surface water depth	Duration	Frequency	Duration		Upper limit	Lower limit	
		<u>Ft</u>					<u>Ft</u>	<u>Ft</u>	
164B: Stoy-----	C	---	---	None ---	---	Jan-May Jun-Dec	1.0-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
175A: Lamont-----	B	---	---	---	---	---	> 6.0	> 6.0	---
175B: Lamont-----	B	---	---	---	---	---	> 6.0	> 6.0	---
175C: Lamont-----	B	---	---	---	---	---	> 6.0	> 6.0	---
214B: Hosmer-----	C	---	---	None ---	---	Jan-Apr May-Dec	1.5-3.5 > 6.0	3.5-6.0 > 6.0	Perched ---
214C: Hosmer-----	C	---	---	None ---	---	Jan-Apr May-Dec	1.5-3.5 > 6.0	3.5-6.0 > 6.0	Perched ---
214C2: Hosmer-----	C	---	---	None ---	---	Jan-Apr May-Dec	1.5-3.5 > 6.0	3.5-6.0 > 6.0	Perched ---
214C3: Hosmer-----	C	---	---	None ---	---	Jan-Apr May-Dec	1.5-3.5 > 6.0	3.5-6.0 > 6.0	Perched ---
214D2: Hosmer-----	C	---	---	None ---	---	Jan-Apr May-Dec	1.5-3.5 > 6.0	3.5-6.0 > 6.0	Perched ---
214D3: Hosmer-----	C	---	---	None ---	---	Jan-Apr May-Dec	1.5-3.5 > 6.0	3.5-6.0 > 6.0	Perched ---
216D: Stookey-----	B	---	---	---	---	---	> 6.0	> 6.0	---
216D2: Stookey-----	B	---	---	---	---	---	> 6.0	> 6.0	---
216E: Stookey-----	B	---	---	---	---	---	> 6.0	> 6.0	---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Month	Water table depth	
		Surface water depth	Duration	Frequency	Duration	Frequency	Upper limit		Lower limit	Water table kind
216E2: Stookey-----	B	<u>Ft</u> ---	---	---		---	---	---	<u>Ft</u> ---	<u>Ft</u> ---
216E3: Stookey-----	B	---	---	---		---	---	---	> 6.0	> 6.0
216F: Stookey-----	B	---	---	---		---	---	---	> 6.0	> 6.0
216G: Stookey-----	B	---	---	---		---	---	---	> 6.0	> 6.0
471F: Clarksville-----	B	---	---	---		---	---	---	> 6.0	> 6.0
471G: Clarksville-----	B	---	---	---		---	---	---	> 6.0	> 6.0
477B: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent
477C: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent
477C2: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent
477C3: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent
477D2: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent
477D3: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent
477E3: Winfield-----	B	---	---	None	---	None	None	Jan-Apr May-Dec	2.0-3.5 > 6.0	> 6.0 Apparent

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Month		Water table depth	
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Upper limit	Water table kind
		<u>Ft</u>						<u>Ft</u>	<u>Ft</u>		
477F: Winfield-----	B	---	---	None	---	None	Jan-Apr	2.0-3.5	> 6.0	Apparent	---
		---	---	---	---	---	May-Dec	> 6.0	> 6.0	---	---
717F: Stookey-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
Clarksville-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
717G: Clarksville-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
Stookey-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
801B: Orthen's-----	C	---	---	---	---	---	---	> 6.0	> 6.0	---	---
802D: Orthen's-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
832F: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
Clarksville-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
832G: Clarksville-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
833F: Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
Goss-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
833G: Goss-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
Menfro-----	B	---	---	---	---	---	---	> 6.0	> 6.0	---	---
864. Pits, quarries											
865. Pits, gravel											

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding		Flooding		Month	Water table depth		
		Surface water depth	Duration	Frequency	Duration		Frequency	Upper limit	Lower limit
		<u>Ft</u>					<u>Ft</u>	<u>Ft</u>	
1426A: Karnak-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
1843A: Bonnie-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
Petrolia-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
1845A: Darwin-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
Jacob-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	1.0-6.0 > 6.0	Perched ---
1846A: Karnak-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
Cape-----	D	0.0-2.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3070L: Beaucoup-----	B/D	0.0-1.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3071A: Darwin-----	C/D	0.0-1.0 ---	Brief ---	Frequent ---	Brief ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3071L: Darwin-----	C/D	0.0-1.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3092BL: Sarpy-----	A	--- ---	--- ---	None ---	Long ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
3108A: Bonnie-----	C/D	0.0-1.0 ---	Brief ---	Frequent ---	Brief ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding		Flooding		Month	Water table depth		Water table kind
		Surface water depth	Duration	Frequency	Duration	Frequency	Upper limit	Lower limit	
		<u>Ft</u>					<u>Ft</u>	<u>Ft</u>	
3162L: Gorham-----	B/D	0.0-1.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3180L: Dupo-----	C	--- --- ---	--- --- ---	None --- ---	Long Long ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	2.0-6.0 > 6.0 > 6.0	Perched --- ---
3284L: Tice-----	B	--- --- ---	--- --- ---	None --- ---	Long Long ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	> 6.0 > 6.0 > 6.0	Apparent --- ---
3288L: Petrolia-----	C/D	0.0-1.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3331A: Haymond-----	B	--- ---	--- ---	None ---	Brief ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
3331L: Haymond-----	B	--- ---	--- ---	None ---	Long ---	Jan-Jun Jul-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
3333A: Wakeland-----	C	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	> 6.0 > 6.0 > 6.0	Apparent --- ---
3333L: Wakeland-----	C	--- --- ---	--- --- ---	None --- ---	Long Long ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	> 6.0 > 6.0 > 6.0	Apparent --- ---
3334A: Birds-----	C/D	0.0-1.0 ---	Brief ---	Frequent ---	Brief ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
3334L: Birds-----	C/D	0.0-1.0 ---	Long ---	Frequent ---	Long ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding		Flooding		Month	Water table depth		
		Surface water depth	Duration	Frequency	Duration		Frequency	Upper limit	Lower limit
		<u>Ft</u>					<u>Ft</u>	<u>Ft</u>	
3382A: Belknap-----	C	---	---	None	Brief	Frequent	0.5-2.0	> 6.0	Apparent
		---	---	---	Brief	Frequent	> 6.0	> 6.0	---
		---	---	---	---	---	> 6.0	> 6.0	---
3420A: Piopolis-----	C/D	0.0-1.0	Brief	Frequent	Brief	Frequent	0.0-1.0	> 6.0	Apparent
		---	---	---	---	---	> 6.0	> 6.0	---
3422A: Cape-----	D	0.0-1.0	Brief	Frequent	Brief	Frequent	0.0-1.0	> 6.0	Apparent
		---	---	---	---	---	> 6.0	> 6.0	---
3422A+: Cape-----	C/D	0.0-1.0	Brief	Frequent	Brief	Frequent	0.0-1.0	> 6.0	Apparent
		---	---	---	---	---	> 6.0	> 6.0	---
3426L: Karnak-----	C/D	0.0-1.0	Long	Frequent	Long	Frequent	0.0-1.0	> 6.0	Apparent
		---	---	---	---	---	> 6.0	> 6.0	---
3449L: Armiesburg-----	B	---	---	None	Long	Frequent	> 6.0	> 6.0	---
		---	---	---	---	---	> 6.0	> 6.0	---
Sarpy-----	A	---	---	None	Long	Frequent	> 6.0	> 6.0	---
		---	---	---	---	---	> 6.0	> 6.0	---
3452L: Riley-----	B	---	---	None	Long	Frequent	1.0-2.0	> 6.0	Apparent
		---	---	---	Long	Frequent	> 6.0	> 6.0	---
		---	---	---	---	---	> 6.0	> 6.0	---
3456B: Ware-----	B	---	---	None	Brief	Frequent	> 6.0	> 6.0	---
		---	---	---	---	---	> 6.0	> 6.0	---
3456BL: Ware-----	B	---	---	None	Long	Frequent	> 6.0	> 6.0	---
		---	---	---	---	---	> 6.0	> 6.0	---
3590L: Cairo-----	D	0.0-1.0	Long	Frequent	Long	Frequent	0.0-1.0	> 6.0	Apparent
		---	---	---	---	---	> 6.0	> 6.0	---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding		Month	Water table depth		
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit	Water table kind
		<u>Ft</u>					<u>Ft</u>	<u>Ft</u>		
3597L: Armiesburg-----	B	---	---	None	Long	Frequent	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
3682BL: Medway-----	B	---	---	None	Long	Frequent	Jan-Apr May Jun-Dec	1.5-3.0 > 6.0 > 6.0	> 6.0 > 6.0 > 6.0	Apparent --- ---
7084A: Okaw-----	D	0.0-0.5	Brief	Frequent	---	Rare	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---
7122B: Colp-----	C	---	---	---	---	Rare	Jan-Apr May-Dec	2.0-4.0 > 6.0	> 6.0 > 6.0	Apparent ---
7122C2: Colp-----	C	---	---	---	---	Rare	Jan-Apr May-Dec	2.0-4.0 > 6.0	> 6.0 > 6.0	Apparent ---
7131A: Alvin-----	B	---	---	---	---	Rare	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---
7131B: Alvin-----	B	---	---	---	---	Rare	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---
7131C: Alvin-----	B	---	---	---	---	Rare	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---
7131C2: Alvin-----	B	---	---	---	---	Rare	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---
7131D2: Alvin-----	B	---	---	---	---	Rare	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---
7338A: Hurst-----	D	---	---	---	---	Rare	Jan-May Jun-Dec	1.0-3.0 > 6.0	> 6.0 > 6.0	Apparent ---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Water table depth		
		Surface water depth	Duration	Frequency	Duration	Frequency	Month	Upper limit	Lower limit	Water table kind
7338B: Hurst-----	D	<u>Ft</u> --- ---	--- ---	--- ---	---	Rare ---	Jan-May Jun-Dec	1.0-3.0 > 6.0	> 6.0	Apparent ---
7401A: Okaw-----	D	0.0-0.5 ---	Brief ---	Frequent ---	---	Rare ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
7460A: Ginat-----	D	0.0-0.5 ---	Brief ---	Occasional ---	---	Rare ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	1.0-6.0 > 6.0	Perched ---
7462A: Sciotoville-----	C	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	1.5-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
7462B: Sciotoville-----	C	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	1.5-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
7462C2: Sciotoville-----	C	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	1.5-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
7462C3: Sciotoville-----	C	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	1.5-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
7462D2: Sciotoville-----	C	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	1.5-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
7462D3: Sciotoville-----	C	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	1.5-3.0 > 6.0	3.0-6.0 > 6.0	Perched ---
7463A: Wheeling-----	B	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---
7463B: Wheeling-----	B	--- ---	--- ---	--- ---	---	Rare ---	Jan-Apr May-Dec	> 6.0 > 6.0	> 6.0 > 6.0	---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Month	Water table depth		
		Surface water depth	Duration	Frequency	Duration	Frequency	Upper limit		Lower limit	Water table kind	
		<u>Ft</u>						<u>Ft</u>	<u>Ft</u>		
7463C2: Wheeling-----	B	---	---	---	---	Rare	Jan-Apr May-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---	
7463D3: Wheeling-----	B	---	---	---	---	Rare	Jan-Apr May-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---	
7711A: Hatfield-----	C	---	---	---	---	Rare	Jan-May Jun-Dec	0.5-2.0 > 6.0	2.0-6.0 > 6.0	Perched ---	
7711B: Hatfield-----	C	---	---	---	---	Rare	Jan-May Jun-Dec	0.5-2.0 > 6.0	2.0-6.0 > 6.0	Perched ---	
8070A: Beaucoup-----	B	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---	
8071A: Darwin-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---	
8072A: Sharon-----	B	---	---	None ---	Brief Brief ---	Occasional Occasional ---	Jan-Apr May Jun-Dec	3.0-6.0 > 6.0 > 6.0	> 6.0 > 6.0 > 6.0	Apparent --- ---	
8085A: Jacob-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	1.0-6.0 > 6.0	Perched ---	
8092B: Sarpy-----	A	---	---	None ---	Brief ---	Occasional ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---	
8108A: Bonnie-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---	
8109A: Raccoon-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---	

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Month	Water table depth	
		Surface water depth	Duration	Frequency	Duration	Frequency	Upper limit		Lower limit	Water table kind
		<u>Ft</u>					<u>Ft</u>			
8162A: Gorham-----	B	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
8175B: Lamont-----	B	--- ---	--- ---	--- ---	Brief ---	Occasional ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
8178A: Ruark-----	B/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
8180A: Dupo-----	C	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	2.0-6.0 > 6.0 > 6.0	Perched --- ---
8184A: Roby-----	C	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	1.0-3.0 > 6.0 > 6.0	> 6.0 > 6.0	Apparent --- ---
8184B: Roby-----	C	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	1.0-3.0 > 6.0 > 6.0	> 6.0 > 6.0	Apparent --- ---
8284A: Tice-----	B	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	> 6.0 > 6.0	Apparent --- ---
8288A: Petrolia-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0	Apparent ---
8331A: Haymond-----	B	--- ---	--- ---	None ---	Brief ---	Occasional ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
8333A: Wakeland-----	C	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	> 6.0 > 6.0	Apparent --- ---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding		Month	Water table depth	
		Surface water depth	Duration	Frequency	Duration	Frequency		Upper limit	Lower limit
		<u>Ft</u>					<u>Ft</u>	<u>Ft</u>	
8334A: Birds-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 Apparent ---
8382A: Belknap-----	C/D	--- --- ---	--- --- ---	None --- ---	Brief --- ---	Occasional ---	Jan-May Jun Jul-Dec	0.5-2.0 > 6.0 > 6.0	> 6.0 Apparent --- ---
8420A: Piopolis-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 Apparent ---
8422A: Cape-----	C/D	0.0-1.0 ---	Brief ---	Frequent ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 Apparent ---
8422A+: Cape-----	C/D	0.0-1.0 ---	Brief ---	Frequent ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 Apparent ---
8426A: Karnak-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jun-Dec	0.0-1.0 > 6.0	> 6.0 Apparent ---
8426A+: Karnak-----	C/D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 Apparent ---
8452A: Riley-----	B	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	1.0-2.0 > 6.0 > 6.0	> 6.0 Apparent --- ---
8452B: Riley-----	B	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-May Jun Jul-Dec	1.0-2.0 > 6.0 > 6.0	> 6.0 Apparent --- ---
8456B: Ware-----	B	--- --- ---	--- --- ---	None --- ---	Brief ---	Occasional ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 ---
8475B: Elsah-----	B	--- ---	--- ---	None ---	Brief ---	Occasional ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 ---

Table 22.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Ponding			Flooding			Water table depth		
		Surface water depth	Duration	Frequency	Duration	Frequency	Month	Upper limit	Lower limit	Water table kind
8589B: Bowdre-----	C	<u>Ft</u> --- ---	--- ---	None ---	Brief ---	Occasional ---	Jan-May Jun-Dec	1.5-2.0 > 6.0	> 6.0 > 6.0	Apparent ---
8590A: Cairo-----	D	0.0-0.5 ---	Brief ---	Occasional ---	Brief ---	Occasional ---	Jan-Jun Jul-Dec	0.0-1.0 > 6.0	> 6.0 > 6.0	Apparent ---
8597A: Armiesburg-----	B	--- ---	--- ---	None ---	Brief ---	Occasional ---	Jan-May Jun-Dec	> 6.0 > 6.0	> 6.0 > 6.0	--- ---
8682B: Medway-----	B	--- --- ---	--- --- ---	None --- ---	Brief Brief ---	Occasional Occasional ---	Jan-Apr May Jun-Dec	1.5-3.0 > 6.0 > 6.0	> 6.0 > 6.0 > 6.0	Apparent --- ---
MW. Miscellaneous water										
W. Water										

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top In	Hardness		Uncoated steel	Concrete
75C: Drury-----	---	---	---	High	Moderate	Moderate
75C3: Drury-----	---	---	---	High	Moderate	Moderate
75D: Drury-----	---	---	---	High	Moderate	Moderate
79B: Menfro-----	---	---	---	High	Low	Moderate
79C: Menfro-----	---	---	---	High	Low	Moderate
79C2: Menfro-----	---	---	---	High	Low	Moderate
79C3: Menfro-----	---	---	---	High	Low	Moderate
79D: Menfro-----	---	---	---	High	Low	Moderate
79D2: Menfro-----	---	---	---	High	Low	Moderate
79D3: Menfro-----	---	---	---	High	Low	Moderate
79E: Menfro-----	---	---	---	High	Low	Moderate
79E2: Menfro-----	---	---	---	High	Low	Moderate
79E3: Menfro-----	---	---	---	High	Low	Moderate
79F: Menfro-----	---	---	---	High	Low	Moderate
164B: Stoy-----	---	25-45	Very weakly cemented	High	High	High
175A: Lamont-----	---	---	---	Moderate	Low	Moderate
175B: Lamont-----	---	---	---	Moderate	Low	Moderate
175C: Lamont-----	---	---	---	Moderate	Low	Moderate

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top In	Hardness		Uncoated steel	Concrete
214B: Hosmer-----	Fragipan	20-36	Weakly cemented	High	Moderate	High
214C: Hosmer-----	Fragipan	20-36	Weakly cemented	High	Moderate	High
214C2: Hosmer-----	Fragipan	20-36	Weakly cemented	High	Moderate	High
214C3: Hosmer-----	Fragipan	20-36	Weakly cemented	High	Moderate	High
214D2: Hosmer-----	Fragipan	20-36	Weakly cemented	High	Moderate	High
214D3: Hosmer-----	Fragipan	20-36	Weakly cemented	High	Moderate	High
216D: Stookey-----	---	---	---	High	Low	Moderate
216D2: Stookey-----	---	---	---	High	Low	Moderate
216E: Stookey-----	---	---	---	High	Low	Moderate
216E2: Stookey-----	---	---	---	High	Low	Moderate
216E3: Stookey-----	---	---	---	High	Low	Moderate
216F: Stookey-----	---	---	---	High	Low	Moderate
216G: Stookey-----	---	---	---	High	Low	Moderate
471F: Clarksville-----	---	---	---	Moderate	Low	High
471G: Clarksville-----	---	---	---	Moderate	Low	High
477B: Winfield-----	---	---	---	High	Moderate	Moderate
477C: Winfield-----	---	---	---	High	Moderate	Moderate
477C2: Winfield-----	---	---	---	High	Moderate	Moderate
477C3: Winfield-----	---	---	---	High	Moderate	Moderate
477D2: Winfield-----	---	---	---	High	Moderate	Moderate

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top <u>In</u>	Hardness		Uncoated steel	Concrete
477D3: Winfield-----	---	---	---	High	Moderate	Moderate
477E3: Winfield-----	---	---	---	High	Moderate	Moderate
477F: Winfield-----	---	---	---	High	Moderate	Moderate
717F: Stookey-----	---	---	---	High	Low	Moderate
Clarksville-----	---	---	---	Moderate	Low	High
717G: Clarksville-----	---	---	---	Moderate	Low	High
Stookey-----	---	---	---	High	Low	Moderate
801B: Orthents-----	---	---	---	High	High	Moderate
802D: Orthents-----	---	---	---	Moderate	Moderate	Moderate
832F: Menfro-----	---	---	---	High	Low	Moderate
Clarksville-----	---	---	---	Moderate	Low	High
832G: Clarksville-----	---	---	---	Moderate	Low	High
Menfro-----	---	---	---	High	Low	Moderate
833F: Menfro-----	---	---	---	High	Low	Moderate
Goss-----	---	---	---	Moderate	Moderate	Moderate
833G: Goss-----	---	---	---	Moderate	Moderate	Moderate
Menfro-----	---	---	---	High	Moderate	High
864. Pits, quarries						
865. Pits, gravel						
1426A: Karnak-----	---	---	---	High	High	Moderate
1843A: Bonnie-----	---	---	---	High	High	High
Petrolia-----	---	---	---	High	High	Low

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top <u>In</u>	Hardness		Uncoated steel	Concrete
1845A: Darwin-----	---	---	---	Moderate	High	Low
Jacob-----	---	---	---	Moderate	High	High
1846A: Karnak-----	---	---	---	High	High	Moderate
Cape-----	---	---	---	High	High	High
3070L: Beaucoup-----	---	---	---	High	High	Low
3071A: Darwin-----	---	---	---	Moderate	High	Low
3071L: Darwin-----	---	---	---	Moderate	High	Low
3092BL: Sarpy-----	---	---	---	Low	Low	Low
3108A: Bonnie-----	---	---	---	High	High	High
3162L: Gorham-----	---	---	---	High	High	Low
3180L: Dupo-----	Strongly contrasting textural stratification	20-40	Noncemented	High	High	Moderate
3284L: Tice-----	---	---	---	High	High	Low
3288L: Petrolia-----	---	---	---	High	High	Low
3331A: Haymond-----	---	---	---	High	Low	Low
3331L: Haymond-----	---	---	---	High	Low	Low
3333A: Wakeland-----	---	---	---	High	High	Low
3333L: Wakeland-----	---	---	---	High	High	Low
3334A: Birds-----	---	---	---	High	High	Moderate
3334L: Birds-----	---	---	---	High	High	Moderate
3382A: Belknap-----	---	---	---	High	High	High

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top In	Hardness		Uncoated steel	Concrete
3420A: Piopolis-----	---	---	---	High	High	High
3422A: Cape-----	---	---	---	High	High	High
3422A+: Cape-----	---	---	---	High	High	High
3426L: Karnak-----	---	---	---	High	High	Moderate
3449L: Armiesburg-----	---	---	---	High	Moderate	Low
Sarpy-----	---	---	---	Low	Low	Low
3452L: Riley-----	Strongly contrasting textural stratification	16-40	Noncemented	High	High	Low
3456B: Ware-----	---	---	---	Moderate	Low	Low
3456BL: Ware-----	---	---	---	Moderate	Low	Low
3590L: Cairo-----	Strongly contrasting textural stratification	20-39	Noncemented	Moderate	High	Moderate
3597L: Armiesburg-----	---	---	---	High	Moderate	Low
3682BL: Medway-----	---	---	---	High	High	Low
7084A: Okaw-----	Abrupt textural change	10-20	Noncemented	High	High	High
7122B: Colp-----	---	---	---	High	High	High
7122C2: Colp-----	---	---	---	High	High	High
7131A: Alvin-----	---	---	---	Moderate	Low	High
7131B: Alvin-----	---	---	---	Moderate	Low	High
7131C: Alvin-----	---	---	---	Moderate	Low	High

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top In	Hardness		Uncoated steel	Concrete
7131C2: Alvin-----	---	---	---	Moderate	Low	High
7131D2: Alvin-----	---	---	---	Moderate	Low	High
7338A: Hurst-----	---	---	---	Moderate	High	High
7338B: Hurst-----	---	---	---	Moderate	High	High
7401A: Okaw-----	Abrupt textural change	10-20	Noncemented	High	High	High
7460A: Ginat-----	---	30-45	Very weakly cemented	High	High	High
7462A: Sciotoville-----	---	18-38	Very weakly cemented	High	Moderate	High
7462B: Sciotoville-----	---	18-38	Very weakly cemented	High	Moderate	High
7462C2: Sciotoville-----	---	18-38	Very weakly cemented	High	Moderate	High
7462C3: Sciotoville-----	---	18-38	Very weakly cemented	High	Moderate	High
7462D2: Sciotoville-----	---	18-38	Very weakly cemented	High	Moderate	High
7462D3: Sciotoville-----	---	18-38	Very weakly cemented	High	Moderate	High
7463A: Wheeling-----	---	---	---	Moderate	Low	Moderate
7463B: Wheeling-----	---	---	---	Moderate	Low	Moderate
7463C2: Wheeling-----	---	---	---	Moderate	Low	Moderate
7463D3: Wheeling-----	---	---	---	Moderate	Low	Moderate
7711A: Hatfield-----	---	30-45	Very weakly cemented	High	High	High

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top <u>In</u>	Hardness		Uncoated steel	Concrete
7711B: Hatfield-----	---	30-45	Very weakly cemented	High	High	High
8070A: Beaucoup-----	---	---	---	High	High	Low
8071A: Darwin-----	---	---	---	Moderate	High	Low
8072A: Sharon-----	---	---	---	High	Low	High
8085A: Jacob-----	---	---	---	Moderate	High	High
8092B: Sarpy-----	---	---	---	Low	Low	Low
8108A: Bonnie-----	---	---	---	High	High	High
8109A: Raccoon-----	---	---	---	High	High	High
8162A: Gorham-----	---	---	---	High	High	Low
8175B: Lamont-----	---	---	---	Moderate	Low	Moderate
8178A: Ruark-----	---	---	---	High	High	High
8180A: Dupo-----	Strongly contrasting textural stratification	20-40	Noncemented	High	High	Moderate
8184A: Roby-----	---	---	---	High	Moderate	High
8184B: Roby-----	---	---	---	High	Moderate	High
8284A: Tice-----	---	---	---	High	High	Low
8288A: Petrolia-----	---	---	---	High	High	Low
8331A: Haymond-----	---	---	---	High	Low	Low
8333A: Wakeland-----	---	---	---	High	High	Low
8334A: Birds-----	---	---	---	High	High	Moderate

Soil Survey of Alexander County, Illinois

Table 23.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top In	Hardness		Uncoated steel	Concrete
8382A: Belknap-----	---	---	---	High	High	High
8420A: Piopolis-----	---	---	---	High	High	High
8422A: Cape-----	---	---	---	High	High	High
8422A+: Cape-----	---	---	---	High	High	High
8426A: Karnak-----	---	---	---	High	High	Moderate
8426A+: Karnak-----	---	---	---	High	High	Moderate
8452A: Riley-----	Strongly contrasting textural stratification	16-40	Noncemented	High	High	Low
8452B: Riley-----	Strongly contrasting textural stratification	16-40	Noncemented	High	High	Low
8456B: Ware-----	---	---	---	Moderate	Low	Low
8475B: Elsah-----	---	---	---	Moderate	Low	Moderate
8589B: Bowdre-----	Strongly contrasting textural stratification	12-20	Noncemented	None	High	Low
8590A: Cairo-----	Strongly contrasting textural stratification	20-39	Noncemented	Moderate	High	Moderate
8597A: Armiesburg-----	---	---	---	High	Moderate	Low
8682B: Medway-----	---	---	---	High	High	Low
MW. Miscellaneous water						
W. Water						

Soil Survey of Alexander County, Illinois

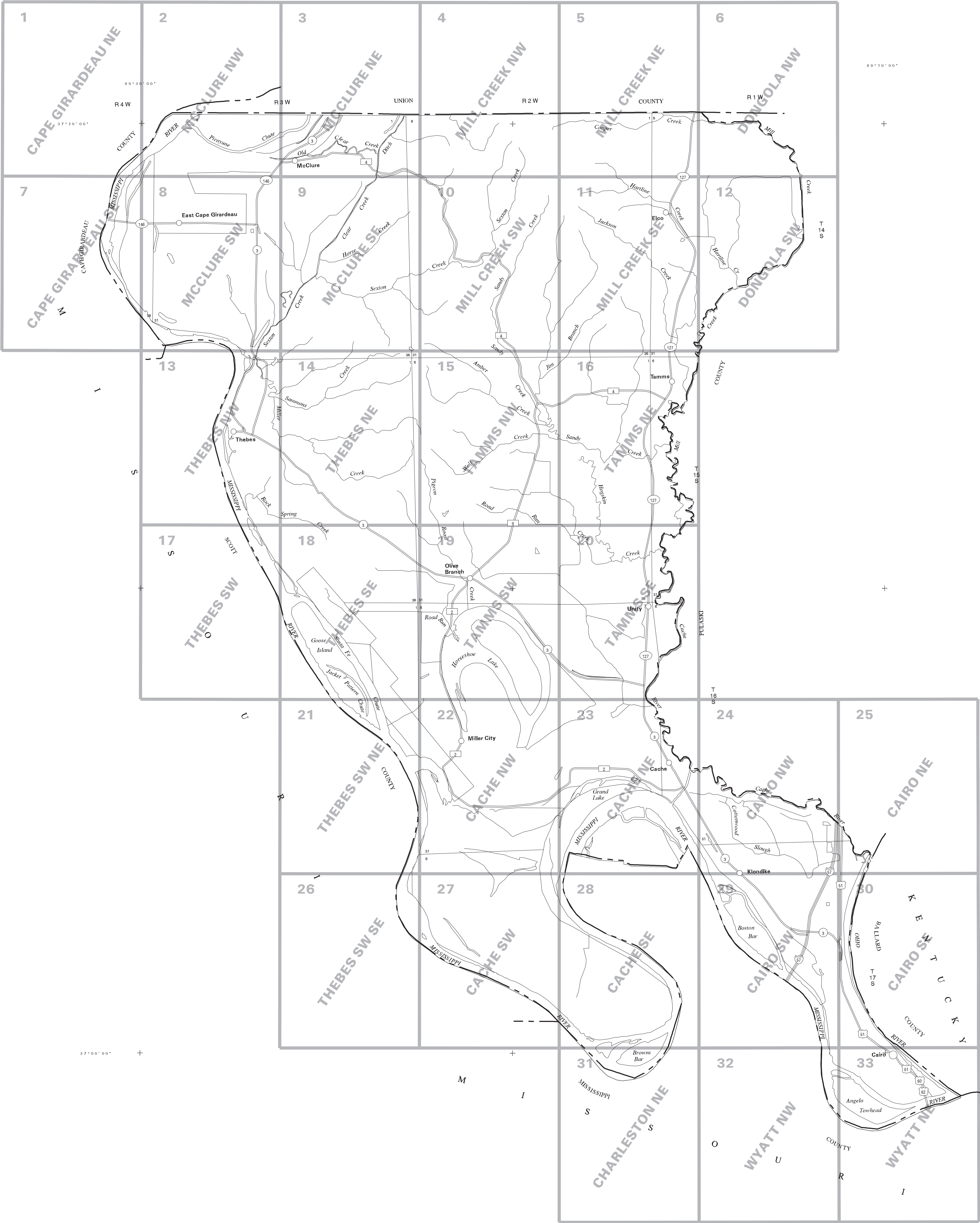
Table 24.—Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Alvin-----	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Armiesburg-----	Fine-silty, mixed, superactive, mesic Fluventic Hapludolls
Beaucoup-----	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Belknap-----	Coarse-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts
Birds-----	Fine-silty, mixed, superactive, nonacid, mesic Typic Fluvaquents
Bonnie-----	Fine-silty, mixed, active, acid, mesic Typic Fluvaquents
Bowdre-----	Clayey over loamy, smectitic, thermic Fluvaquentic Hapludolls
Cairo-----	Clayey over sandy or sandy-skeletal, smectitic over mixed, thermic Vertic Endoaquolls
Cape-----	Fine, smectitic, acid, mesic Vertic Endoaquepts
Clarksville-----	Loamy-skeletal, siliceous, semiactive, mesic Typic Paleudults
Colp-----	Fine, smectitic, mesic Aquertic Chromic Hapludalfs
Darwin-----	Fine, smectitic, mesic Fluvaquentic Vertic Endoaquolls
Drury-----	Fine-silty, mixed, superactive, mesic Dystric Eutrudepts
Dupo-----	Coarse-silty over clayey, mixed over smectitic, superactive, nonacid, mesic Aquic Udifluvents
Elsah-----	Loamy-skeletal, mixed, superactive, nonacid, mesic Typic Udifluvents
*Ginat-----	Fine-silty, mixed, active, mesic Fragic Epiaqualfs
Gorham-----	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Goss-----	Clayey-skeletal, mixed, active, mesic Typic Paleudalfs
Hatfield-----	Fine-silty, mixed, active, mesic Aeris Fragic Epiaqualfs
Haymond-----	Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts
Hosmer-----	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
Hurst-----	Fine, smectitic, mesic Aeris Chromic Vertic Epiaqualfs
Jacob-----	Very fine, smectitic, acid, mesic Vertic Endoaquepts
Karnak-----	Fine, smectitic, nonacid, mesic Vertic Endoaquepts
Lamont-----	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Medway-----	Fine-loamy, mixed, superactive, mesic Fluvaquentic Hapludolls
Menfro-----	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Okaw-----	Fine, smectitic, mesic Chromic Vertic Albaqualfs
Orthents-----	Fine-loamy, mixed, active, nonacid, mesic Typic Udorthents
Orthents-----	Fine-silty, mixed, superactive, nonacid, mesic Typic Udorthents
Petrolia-----	Fine-silty, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts
Piopolis-----	Fine-silty, mixed, active, acid, mesic Fluvaquentic Endoaquepts
Racoon-----	Fine-silty, mixed, superactive, mesic Typic Endoaqualfs
Riley-----	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Fluvaquentic Hapludolls
Roby-----	Coarse-loamy, mixed, superactive, mesic Aquic Hapludalfs
Ruark-----	Fine-loamy, mixed, active, mesic Typic Endoaqualfs
Sarpy-----	Mixed, mesic Typic Udipsamments
*Sciotoville-----	Fine-loamy, mixed, active, mesic Fragiaquic Hapludalfs
Sharon-----	Coarse-silty, mixed, active, acid, mesic Oxyaquic Udifluvents
Stookey-----	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Stoy-----	Fine-silty, mixed, superactive, mesic Fragiaquic Hapludalfs
Tice-----	Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Wakeland-----	Coarse-silty, mixed, superactive, nonacid, mesic Aeris Fluvaquents
Ware-----	Coarse-loamy, mixed, active, thermic Fluventic Hapludolls
Wheeling-----	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Winfield-----	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs

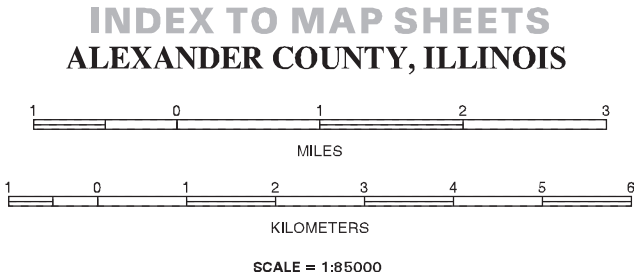
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SECTIONALIZED
TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36



SOIL LEGEND

Map unit symbols consist of a combination of numbers and letters. The initial numbers represent the kind of soil or miscellaneous area. An uppercase letter following these numbers indicates the class of slope, except that the letter "L" indicates flooding of long duration. A final number of 2 following the slope class letter indicates that the soil is moderately eroded, and a final number of 3 indicates that the soil is severely eroded. Symbols that do not have a final number of 2 or 3 following a slope class letter indicate map units that are not eroded or are only slightly eroded. Symbols for miscellaneous areas do not have a slope class letter.

SYMBOL	NAME	SYMBOL	NAME
75C	Drury silt loam, 5 to 10 percent slopes	3382A	Belknap silt loam, 0 to 2 percent slopes, frequently flooded
75C3	Drury silt loam, 5 to 10 percent slopes, severely eroded	3420A	Piopolis silty clay loam, 0 to 2 percent slopes, frequently flooded
75D	Drury silt loam, 10 to 18 percent slopes	3422A	Cape silty clay loam, 0 to 2 percent slopes, frequently flooded
79B	Menfro silt loam, 2 to 5 percent slopes	3422A+	Cape silt loam, overwash, 0 to 2 percent slopes, frequently flooded
79C	Menfro silt loam, 5 to 10 percent slopes	3426L	Karnak silty clay, 0 to 2 percent slopes, frequently flooded, long duration
79C2	Menfro silt loam, 5 to 10 percent slopes, eroded	3449L	Armiesburg-Sarpy complex, 0 to 2 percent slopes, frequently flooded, long duration
79C3	Menfro silt loam, 5 to 10 percent slopes, severely eroded	3452L	Riley silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration
79D	Menfro silt loam, 10 to 18 percent slopes	3456B	Ware loam, 1 to 6 percent slopes, frequently flooded
79D2	Menfro silt loam, 10 to 18 percent slopes, eroded	3456BL	Ware loam, 1 to 6 percent slopes, frequently flooded, long duration
79D3	Menfro silt loam, 10 to 18 percent slopes, severely eroded	3590L	Cairo silty clay, 0 to 2 percent slopes, frequently flooded, long duration
79E	Menfro silt loam, 18 to 25 percent slopes	3597L	Armiesburg silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration
79E2	Menfro silt loam, 18 to 25 percent slopes, eroded	3682BL	Medway silty clay loam, 1 to 6 percent slopes, frequently flooded, long duration
79E3	Menfro silt loam, 18 to 25 percent slopes, severely eroded	7084A	Okaw silt loam, 0 to 2 percent slopes, rarely flooded
79F	Menfro silt loam, 25 to 35 percent slopes	7122B	Colp silt loam, 2 to 5 percent slopes, rarely flooded
164B	Stoy silt loam, 2 to 5 percent slopes	7122C2	Colp silt loam, 5 to 10 percent slopes, eroded, rarely flooded
175A	Lamont fine sandy loam, 0 to 2 percent slopes	7131A	Alvin fine sandy loam, 0 to 2 percent slopes, rarely flooded
175B	Lamont fine sandy loam, 2 to 5 percent slopes	7131B	Alvin fine sandy loam, 2 to 5 percent slopes, rarely flooded
175C	Lamont fine sandy loam, 5 to 10 percent slopes, eroded	7131C	Alvin fine sandy loam, 5 to 10 percent slopes, rarely flooded
214B	Hosmer silt loam, 2 to 5 percent slopes	7131C2	Alvin fine sandy loam, 5 to 10 percent slopes, eroded, rarely flooded
214C	Hosmer silt loam, 5 to 10 percent slopes	7131D2	Alvin fine sandy loam, 10 to 18 percent slopes, eroded, rarely flooded
214C2	Hosmer silt loam, 5 to 10 percent slopes, eroded	7338A	Hurst silt loam, 0 to 2 percent slopes, rarely flooded
214C3	Hosmer silt loam, 5 to 10 percent slopes, severely eroded	7338B	Hurst silt loam, 2 to 5 percent slopes, rarely flooded
214D2	Hosmer silt loam, 10 to 18 percent slopes, eroded	7401A	Okaw silty clay loam, 0 to 2 percent slopes, rarely flooded
214D3	Hosmer silt loam, 10 to 18 percent slopes, severely eroded	7460A	Ginat silt loam, 0 to 2 percent slopes, rarely flooded
216D	Stookey silt loam, 10 to 18 percent slopes	7462A	Sciotoville silt loam, 0 to 2 percent slopes, rarely flooded
216D2	Stookey silt loam, 10 to 18 percent slopes, eroded	7462B	Sciotoville silt loam, 2 to 5 percent slopes, rarely flooded
216E	Stookey silt loam, 18 to 25 percent slopes	7462C2	Sciotoville silt loam, 5 to 10 percent slopes, eroded, rarely flooded
216E2	Stookey silt loam, 18 to 25 percent slopes, eroded	7462C3	Sciotoville silt loam, 5 to 10 percent slopes, severely eroded, rarely flooded
216E3	Stookey silt loam, 18 to 25 percent slopes, severely eroded	7462D2	Sciotoville silt loam, 10 to 18 percent slopes, eroded, rarely flooded
216F	Stookey silt loam, 25 to 35 percent slopes	7462D3	Sciotoville silt loam, 10 to 18 percent slopes, severely eroded, rarely flooded
216G	Stookey silt loam, 35 to 70 percent slopes	7463A	Wheeling silt loam, 0 to 2 percent slopes, rarely flooded
471F	Clarksville gravelly silt loam, 25 to 35 percent slopes	7463B	Wheeling silt loam, 2 to 5 percent slopes, rarely flooded
471G	Clarksville gravelly silt loam, 35 to 70 percent slopes	7463C2	Wheeling silt loam, 5 to 10 percent slopes, eroded, rarely flooded
477B	Winfield silt loam, 2 to 5 percent slopes	7463D3	Wheeling silt loam, 10 to 18 percent slopes, severely eroded, rarely flooded
477C	Winfield silt loam, 5 to 10 percent slopes	7711A	Hatfield silt loam, 0 to 2 percent slopes, rarely flooded
477C2	Winfield silt loam, 5 to 10 percent slopes, eroded	7711B	Hatfield silt loam, 2 to 5 percent slopes, occasionally flooded
477C3	Winfield silt loam, 5 to 10 percent slopes, severely eroded	8070A	Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded
477D2	Winfield silt loam, 10 to 18 percent slopes, eroded	8071A	Darwin silty clay, 0 to 2 percent slopes, occasionally flooded
477D3	Winfield silt loam, 10 to 18 percent slopes, severely eroded	8072A	Sharon silt loam, 0 to 3 percent slopes, occasionally flooded
477E3	Winfield silt loam, 18 to 25 percent slopes, severely eroded	8085A	Jacob silty clay, 0 to 2 percent slopes, occasionally flooded
477F	Winfield silt loam, 25 to 35 percent slopes	8092B	Sarpy sand, 1 to 8 percent slopes, occasionally flooded
717F	Stookey-Clarksville complex, 18 to 35 percent slopes	8108A	Bonnie silt loam, 0 to 2 percent slopes, occasionally flooded
717G	Clarksville-Stookey complex, 35 to 70 percent slopes	8109A	Raccoon silt loam, 0 to 2 percent slopes, occasionally flooded
801B	Orthents, silty, undulating	8162A	Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded
802D	Orthents, loamy, hilly	8175B	Lamont fine sandy loam, 2 to 7 percent slopes, occasionally flooded
832F	Menfro-Clarksville complex, 18 to 35 percent slopes	8178A	Ruark fine sandy loam, 0 to 2 percent slopes, occasionally flooded
832G	Clarksville-Menfro complex, 35 to 70 percent slopes	8180A	Dupo silt loam, 0 to 2 percent slopes, occasionally flooded
833F	Menfro-Goss complex, 18 to 35 percent slopes	8184A	Roby fine sandy loam, 0 to 2 percent slopes, occasionally flooded
833G	Goss-Menfro complex, 35 to 70 percent slopes	8184B	Roby fine sandy loam, 2 to 5 percent slopes, occasionally flooded
864	Pits, quarries	8284A	Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded
865	Pits, gravel	8288A	Petrolia silty clay loam, 0 to 2 percent slopes, occasionally flooded
1426A	Karnak silty clay, undrained, 0 to 2 percent slopes, frequently flooded	8331A	Haymond silt loam, 0 to 3 percent slopes, occasionally flooded
1843A	Bonnie and Petrolia soils, undrained, 0 to 2 percent slopes, frequently flooded	8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded
1845A	Darwin and Jacob silty clays, undrained, 0 to 2 percent slopes, frequently flooded	8334A	Birds silt loam, 0 to 2 percent slopes, occasionally flooded
1846A	Karnak and Cape silty clays, undrained, 0 to 2 percent slopes, frequently flooded	8382A	Belknap silt loam, 0 to 2 percent slopes, occasionally flooded
3070L	Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	8420A	Piopolis silty clay loam, 0 to 3 percent slopes, occasionally flooded
3071A	Darwin silty clay, 0 to 2 percent slopes, frequently flooded	8422A	Cape silty clay loam, 0 to 2 percent slopes, occasionally flooded
3071L	Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration	8422A+	Cape silt loam, overwash, 0 to 2 percent slopes, occasionally flooded
3092BL	Sarpy fine sand, 1 to 8 percent slopes, frequently flooded, long duration	8426A	Karnak clay, 0 to 2 percent slopes, occasionally flooded
3108A	Bonnie silt loam, 0 to 2 percent slopes, frequently flooded	8426A+	Karnak silt loam, overwash, 0 to 2 percent slopes, occasionally flooded
3162L	Gorham silty clay loam, 0 to 3 percent slopes, frequently flooded, long duration	8452A	Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded
3180L	Dupo silt loam, 0 to 2 percent slopes, frequently flooded, long duration	8452B	Riley silty clay loam, 2 to 5 percent slopes, occasionally flooded
3284L	Tice silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	8456B	Ware loam, 1 to 6 percent slopes, occasionally flooded
3288L	Petrolia silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	8475B	Elsah silt loam, 1 to 4 percent slopes, occasionally flooded
3331A	Haymond silt loam, 0 to 3 percent slopes, frequently flooded	8589B	Bowdre silty clay, 1 to 6 percent slopes, occasionally flooded
3331L	Haymond silt loam, 0 to 3 percent slopes, frequently flooded, long duration	8590A	Cairo silty clay, 0 to 2 percent slopes, occasionally flooded
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded	8597A	Armiesburg silty clay loam, 0 to 2 percent slopes, occasionally flooded
3333L	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration	8682B	Medway silty clay loam, 1 to 6 percent slopes, occasionally flooded
3334A	Birds silt loam, 0 to 2 percent slopes, frequently flooded	MW	Miscellaneous water
3334L	Birds silt loam, 0 to 2 percent slopes, frequently flooded, long duration	W	Water

CONVENTIONAL AND SPECIAL
SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES	
National, state, or province	--
County or parish	— — — —
Minor civil division	— — — — —
Reservation (national forest or park, state forest or park)	— — — — —
Land grant	— — — — —
Limit of soil survey (label) and/or denied access area	— — — — —
Field sheet matchline & neatline	— — — — —
Previously Published Survey	— — — — —
OTHER BOUNDARY (label)	— — — — —
Airport, airfield	— — — — —
Cemetery	— — — — —
City/county park	— — — — —

STATE COORDINATE TICK
1 890 000 FEET








LAND DIVISION CORNER
(section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

Divided roads	==
Other roads	— — — — —
Trail	- - - - -

ROAD EMBLEM & DESIGNATIONS

Interstate	 
Federal	 
State	 
County, farm or ranch	

RAILROAD

POWER TRANSMISSION LINE




PIPELINE

FENCE











LEVEES

Without road	=====
With road	=====
With railroad	=====
Single side slope (showing actual feature location)	=====

DAMS




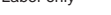
Medium or Small	
Prominent hill or peak	
Soil Sample Site	

MISCELLANEOUS CULTURAL FEATURES

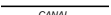


Farmstead, house (omit in urban areas)	
Church	
School	
Other Religion (label)	
Located object (label)	
Tank (label)	
Lookout Tower	
Oil and/or Natural Gas Wells	
Windmill	
Lighthouse	

HYDROGRAPHIC FEATURES

STREAMS

Perennial, double line	
Perennial, single line	
Intermittent	
Drainage end	

DRAINAGE AND IRRIGATION

Double-line canal (label)	
Perennial drainage and/or irrigation ditch	
Intermittent drainage and/ or irrigation ditch	

SMALL LAKES, PONDS AND RESERVOIRS

Perennial water	
Miscellaneous water	
Flood pool line	

MISCELLANEOUS WATER FEATURES







Spring	
Well, artesian	
Well, irrigation	

SPECIAL SYMBOLS FOR SOIL
SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS

LANDFORM FEATURES

ESCARPMENTS













Bedrock	
Other than bedrock	
Short steep slope	
Gully	
Depression, closed	
Sinkhole	

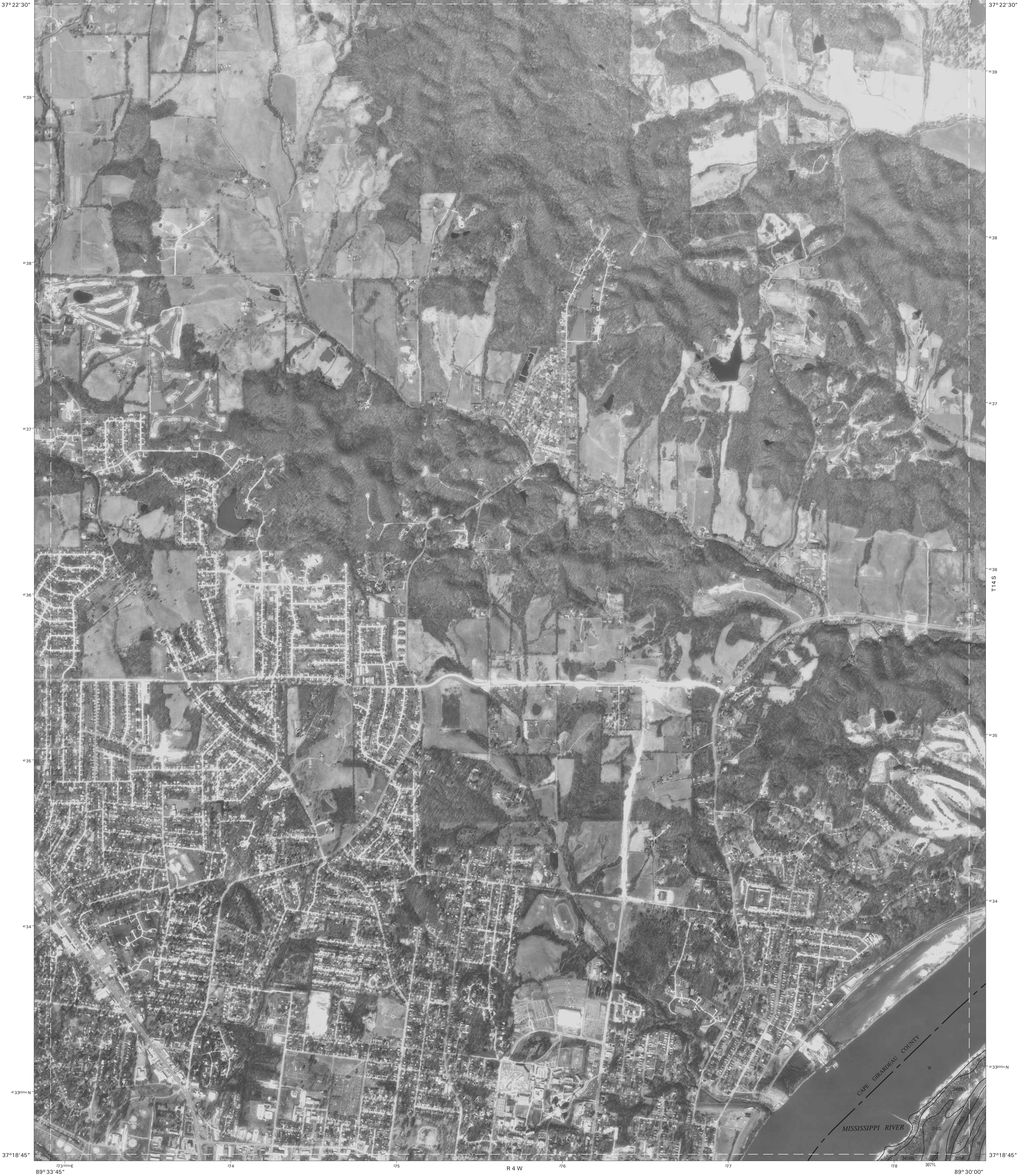
EXCAVATIONS

PITS

Borrow pits	
Gravel pit	
Mine or quarry	
Landfill	

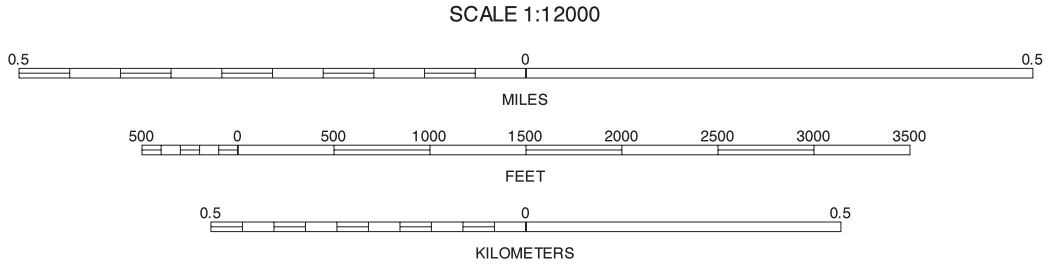
MISCELLANEOUS SURFACE FEATURES

Blowout	
Clay spot	
Gravelly spot	
Lava flow	
Marsh or swamp	
Rock outcrop (includes sandstone and shale)	
Saline spot	
Sandy spot	
Severely eroded spot	
Slide or slip	
Sodic spot	
Spoil area	
Stony spot	
Very stony spot	
Wet spot	



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1988 - 1999 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

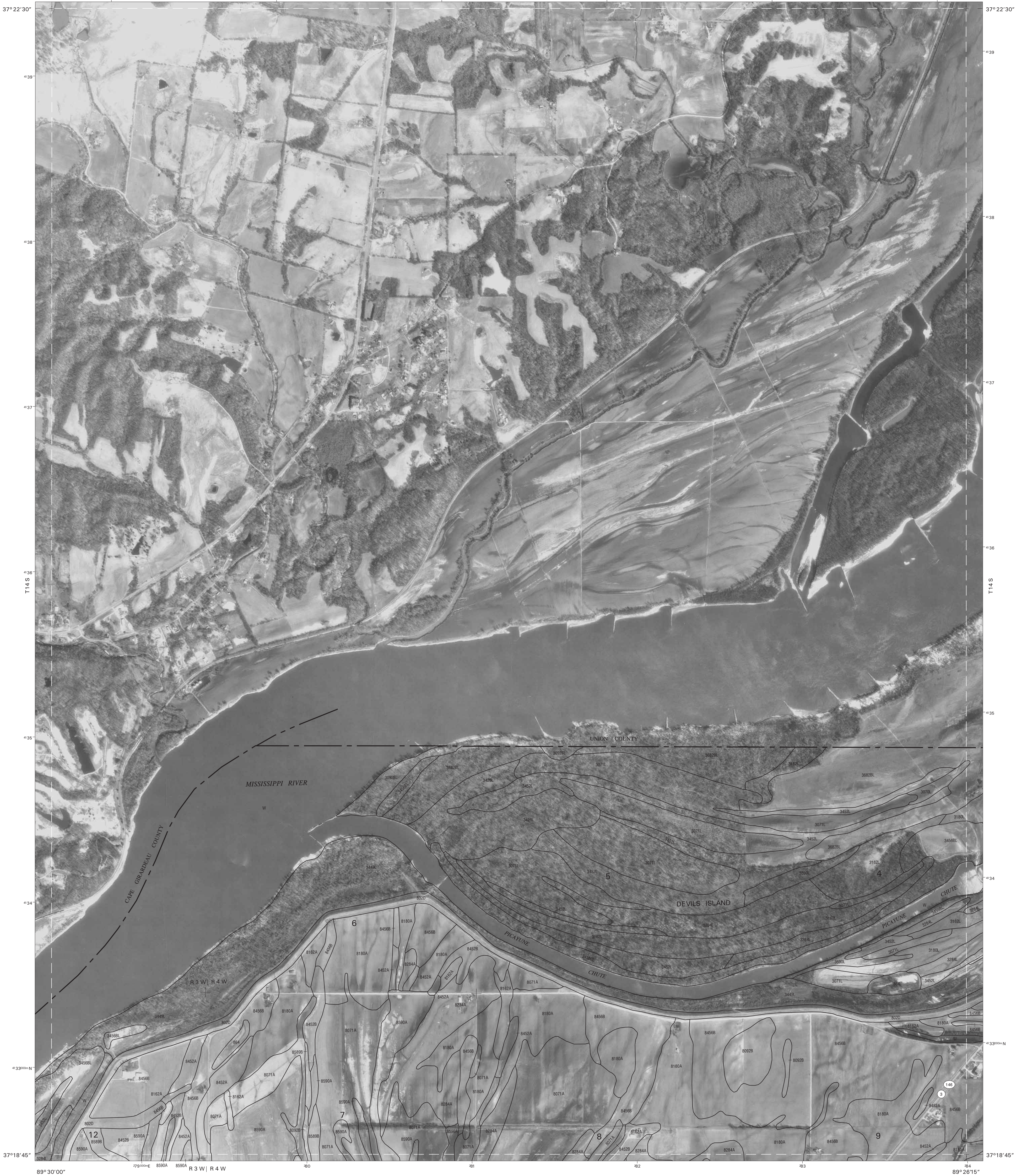


	2	2 MCCLURE NW
7	8	7 CAPE GIRARDEAU SE 8 MCCLURE SW

INDEX TO ADJOINING 3.75 MAPS

CAPE GIRARDEAU NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 1 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



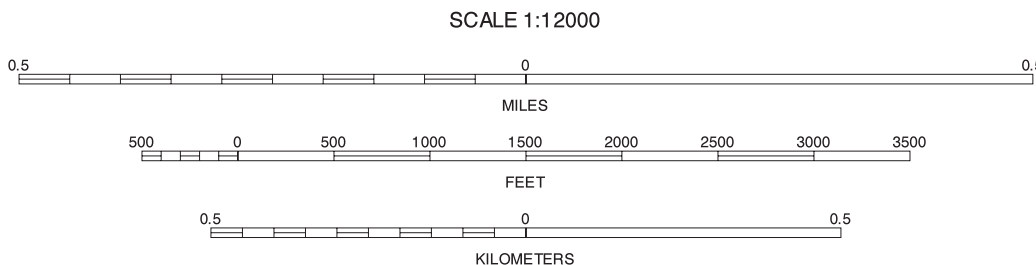
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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUARTER QUADRANGLE LOCATION

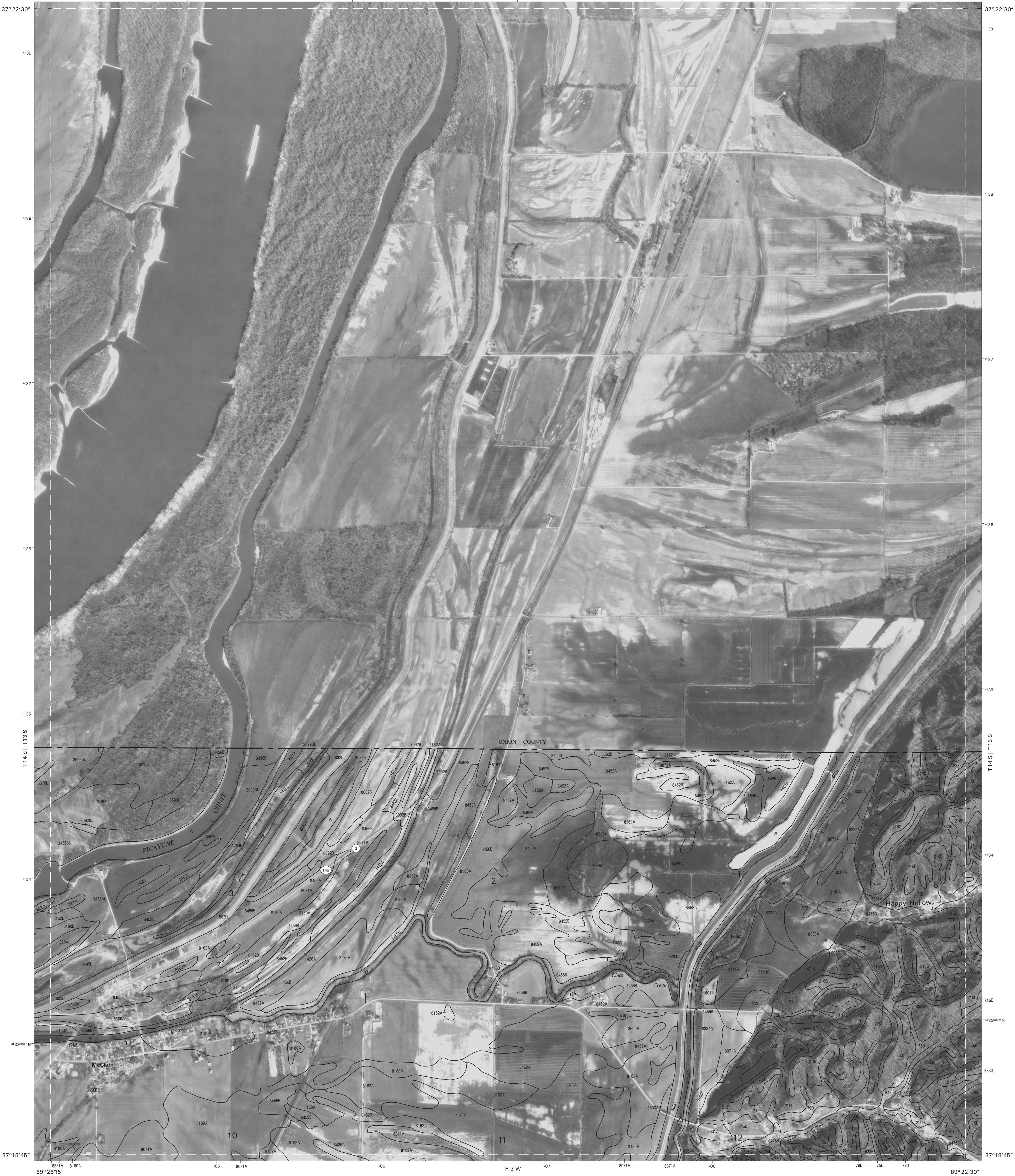


1	2	3
7	8	9

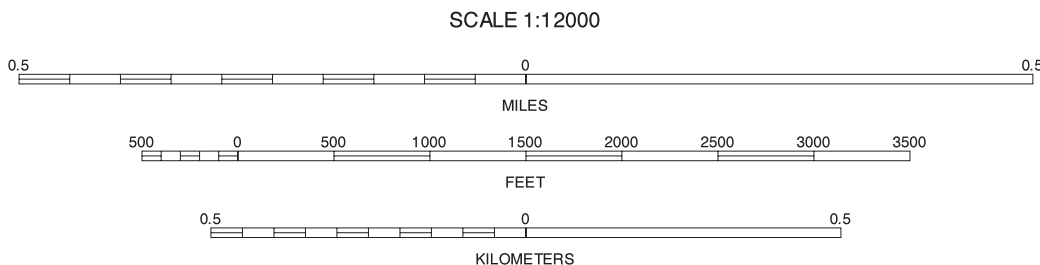
INDEX TO ADJOINING 3.75 MAPS

MCCLURE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 2 OF 33

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North American Datum of 1983 (NAD83), GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

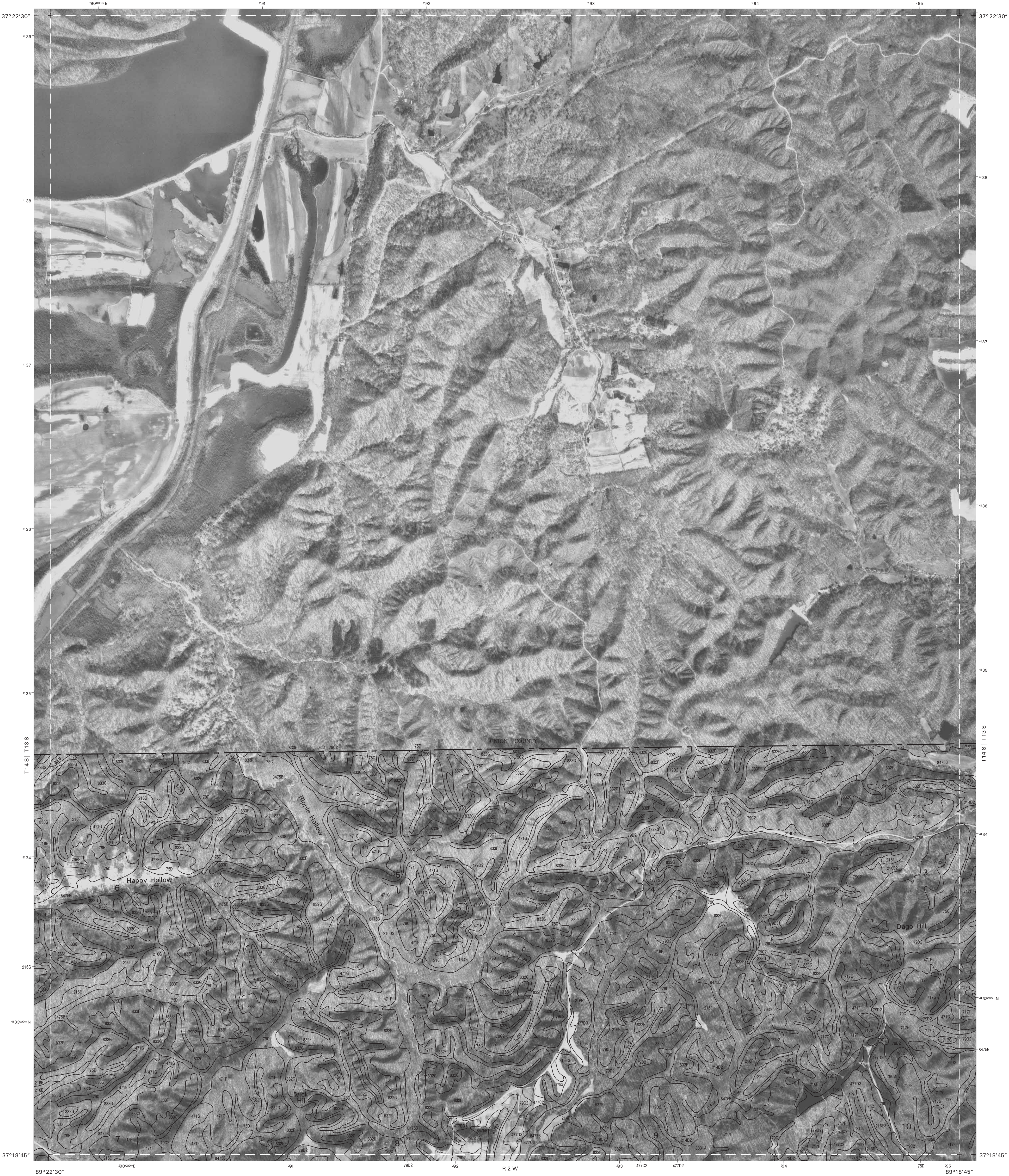


2	4	8	10
2	4	8	10

INDEX TO ADJOINING 3.75 MAPS

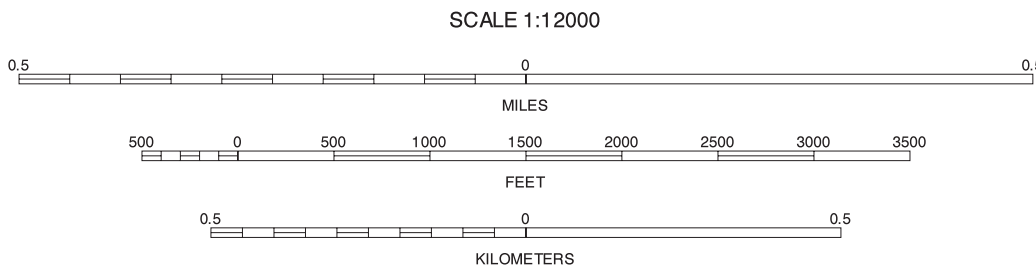
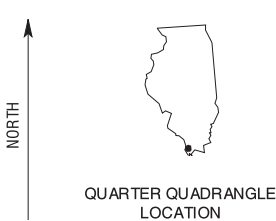
MCCLURE NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 3 OF 33

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North American Datum of 1983 (NAD83), GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



3	5	
9	10	11

INDEX TO ADJOINING 3.75 MAPS

MILL CREEK NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 4 OF 33

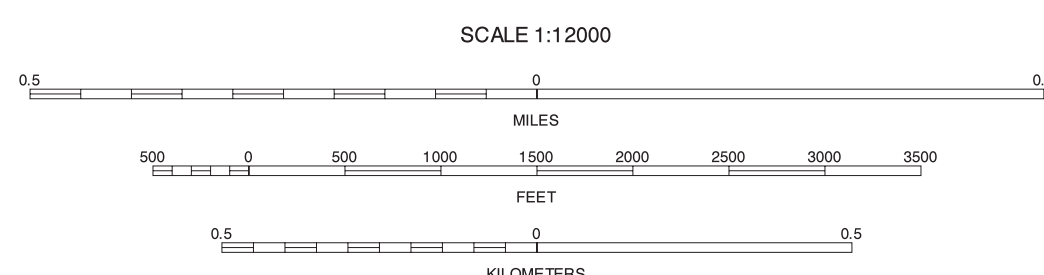
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

89°18'45"

89°15'00"

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

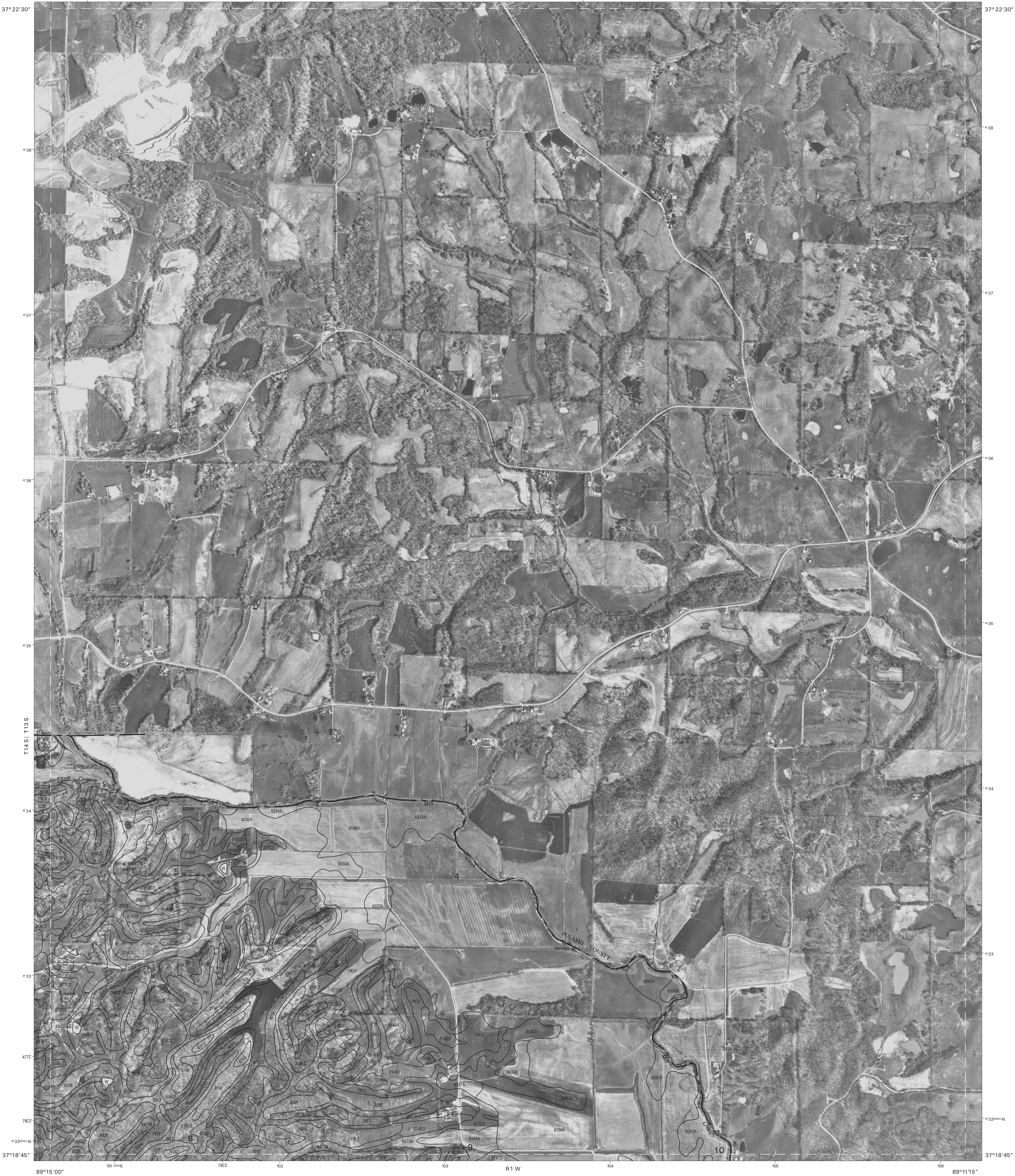


4		6
10	11	12

INDEX TO ADJOINING 3.75

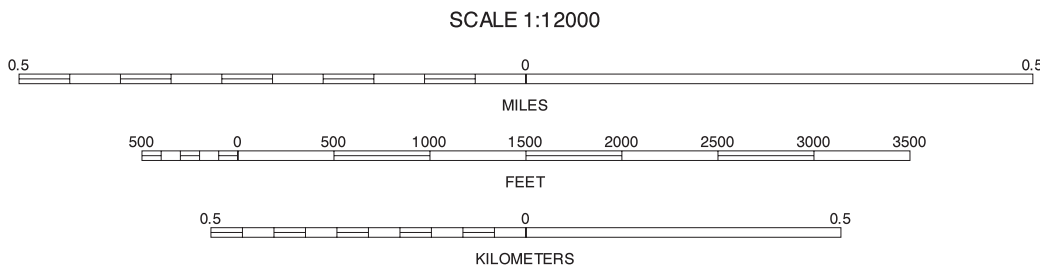
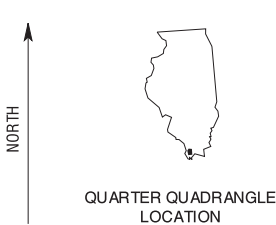
MILL CREEK NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 5 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1988 - 1999 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

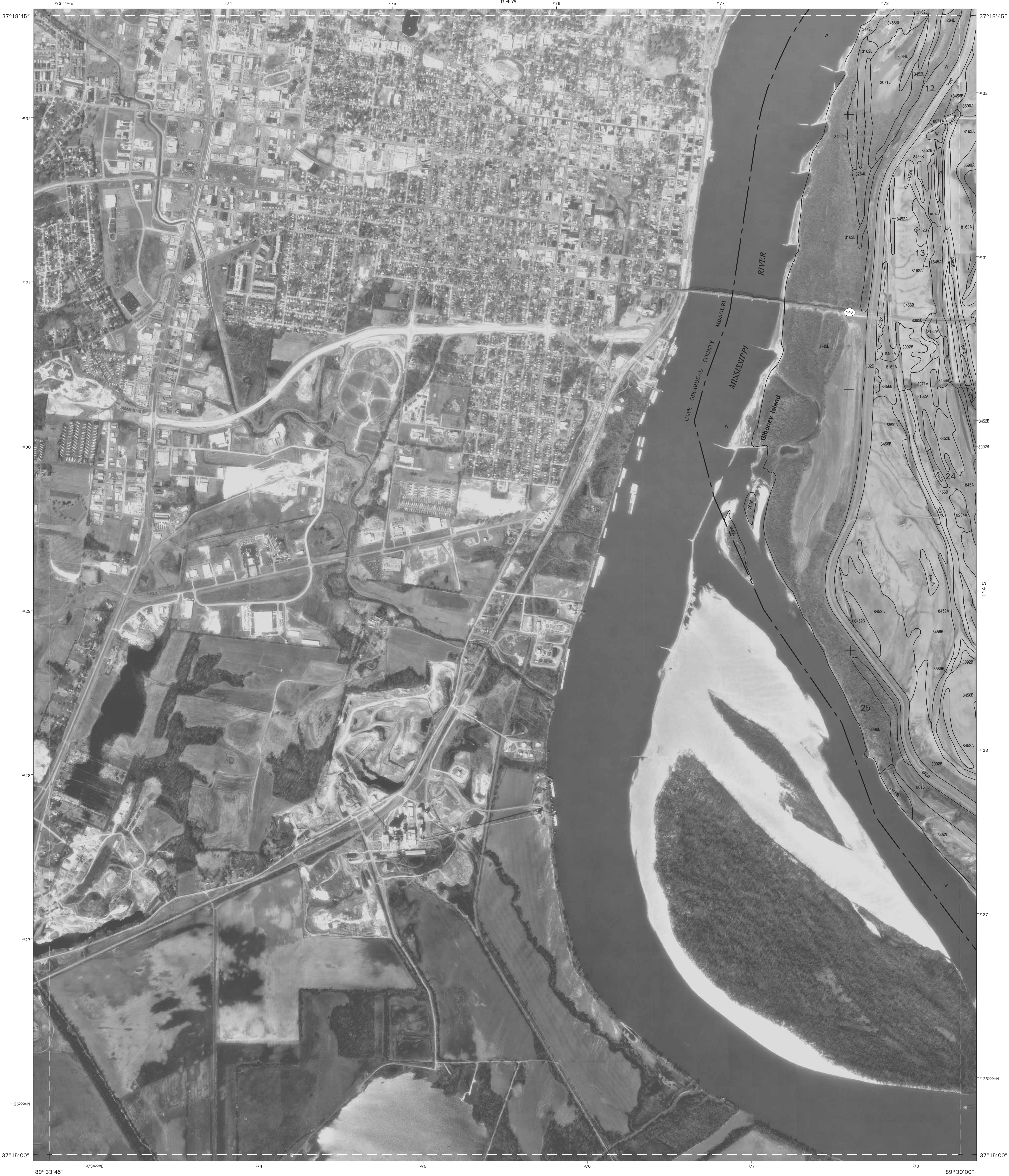


5	11	12	5 MILL CREEK NE 11 MILL CREEK SE 12 DONGOLA SW
---	----	----	--

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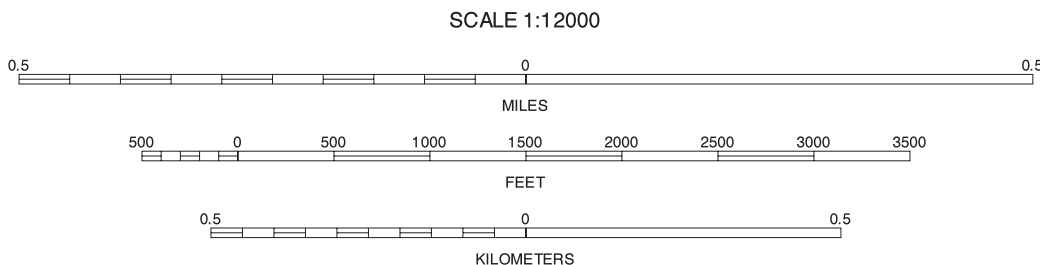
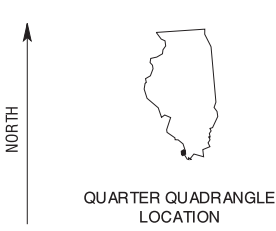
DONGOLA NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 6 OF 33

Soil map delineations extending beyond the dashed white quadrangle neartine are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



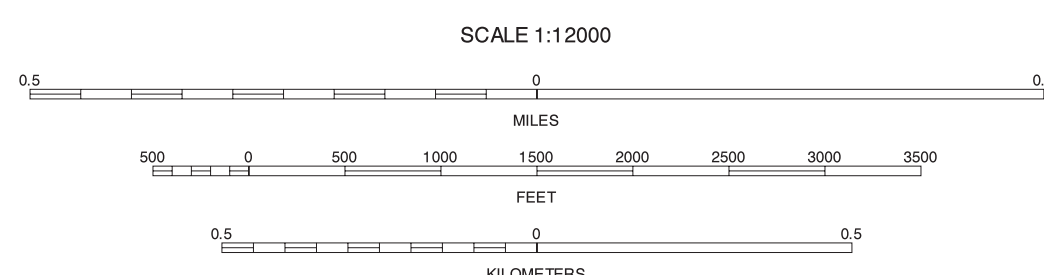
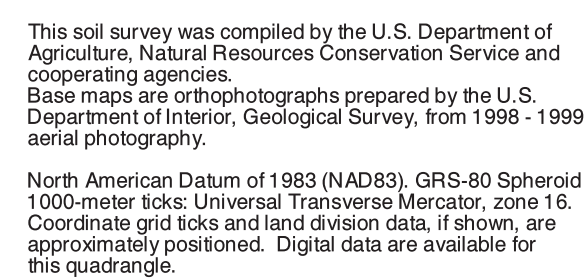
1	2
8	13

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CAPE GIRARDEAU SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatine are for reference only and are included on adjacent map sheets.

ALEXANDER COUNTY, ILLINOIS
MCCLURE SW QUADRANGLE
SHEET NUMBER 8 OF 33



1	2	3	1 CAPE GIRARDEAU NE
7		9	2 MCCLURE NW
	13	14	3 MCCLURE NE
			7 CAPE GIRARDEAU SE
			9 MCCLURE SE
			13 THEBES NW
			14 THEBES NE

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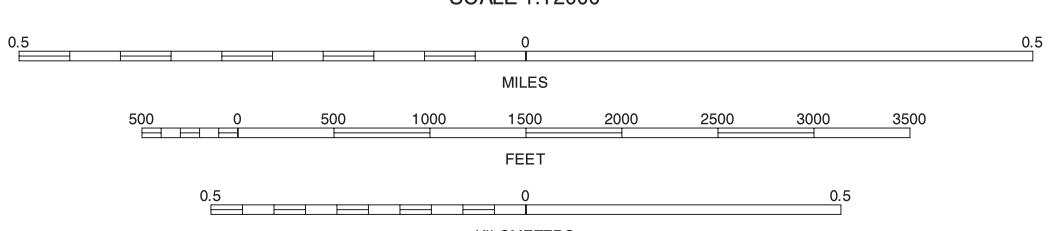
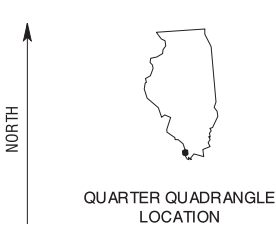
MCCLURE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 8 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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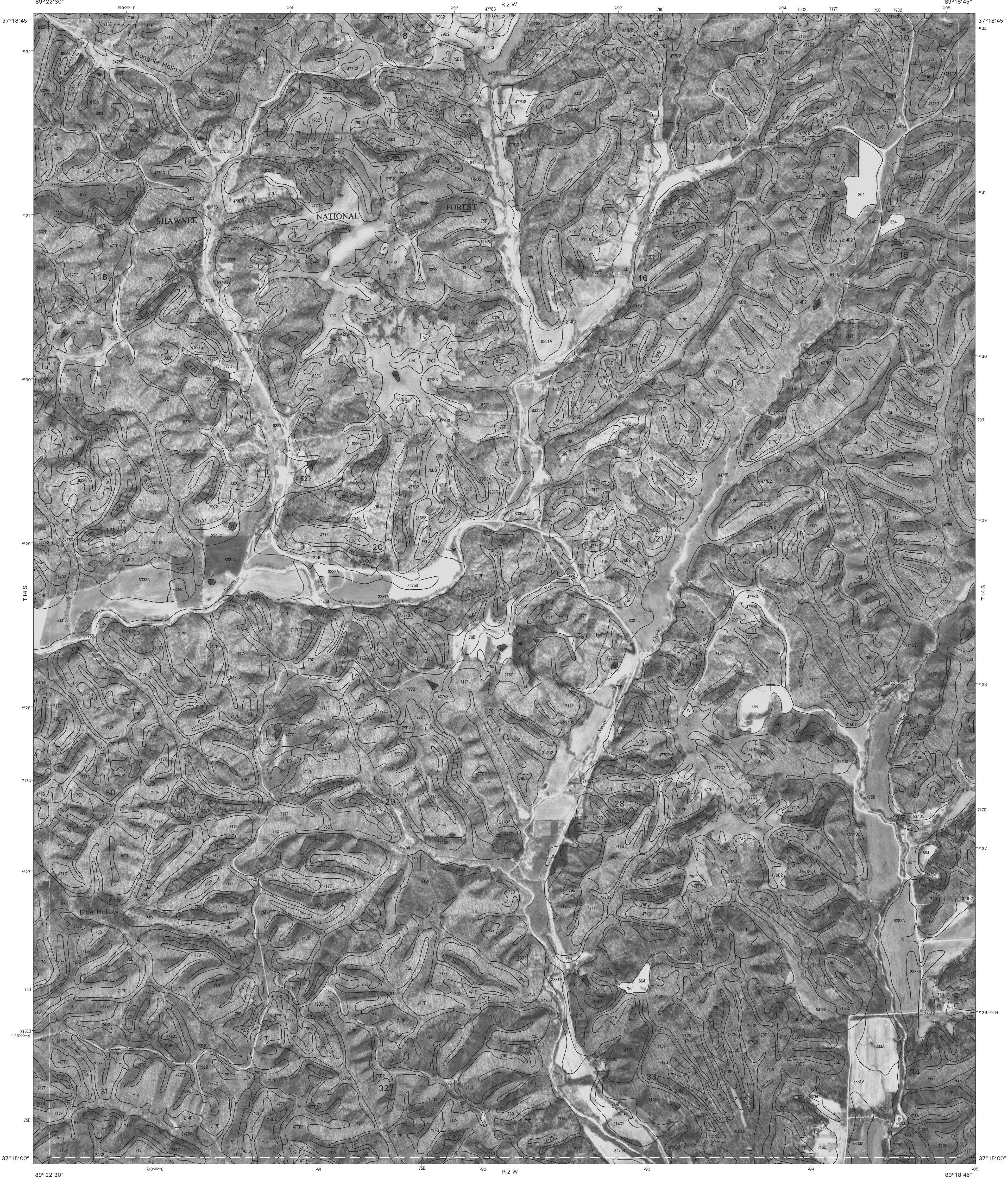
North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



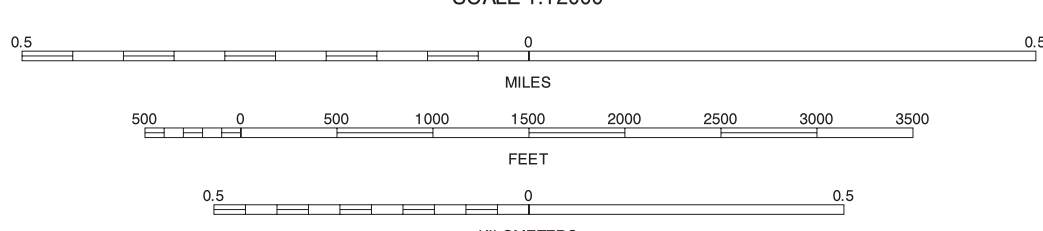
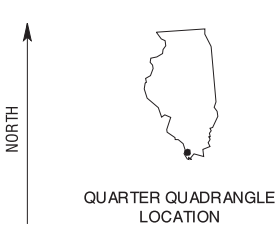
2	3	4	2 MCCLURE NW
5	6	7	3 MCCLURE NE
8	9	10	4 MILL CREEK NW
11	12	13	5 MCCLURE SW
14	15	16	6 MILL CREEK SW
17	18	19	7 THERE'S NW
20	21	22	8 THERE'S NE
23	24	25	9 TAMES NW
26	27	28	10 TAMES NE
29	30	31	11 TAMES SW
32	33	34	12 TAMES SE
35	36	37	13 TAMES NW
38	39	40	14 TAMES NE
41	42	43	15 TAMES SW
44	45	46	16 TAMES SE

MCCLURE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 9 OF 33

Soil map delineations extending beyond the dashed white quadrangle neartine are for reference only and are included on adjacent map sheets.



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1958-1999 aerial photography.
North American Datum of 1983 (NAD83), GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



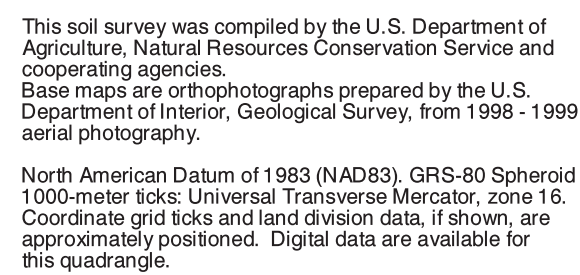
3	4	5	3 MCCLURE NE
			4 MILL CREEK NW
			5 MILL CREEK NE
9		11	9 MCCLURE SE
			11 MILL CREEK SE
			14 TAMES NE
14	15	16	15 TAMMS NW
			16 TAMMS NE

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MILL CREEK SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 10 OF 33

Soil map delineations extending beyond the dashed white quadrangle neartine are for reference only and are included on adjacent map sheets.

ALEXANDER COUNTY, ILLINOIS
MILL CREEK SE QUADRANGLE
SHEET NUMBER 11 OF 33
89°15'00"



SCALE 1:12000

The image displays three horizontal graphical scales. The top scale is for miles, with a total length of 0.5 miles, marked at 0, 0.1, 0.2, 0.3, 0.4, and 0.5. The middle scale is for feet, with a total length of 3500 feet, marked at 500, 1000, 1500, 2000, 2500, 3000, and 3500. The bottom scale is for kilometers, with a total length of 0.5 kilometers, marked at 0, 0.1, 0.2, 0.3, 0.4, and 0.5. Each scale is represented by a horizontal line with vertical tick marks and numerical labels.

MILES

FEET

KILOMETERS

4	5	6	4 MILL CREEK
			5 MILL CREEK
10		12	6 DONGOLA N
			10 MILL CREEK
			12 DONGOLA S
15	16		15 TAMMS NW
			16 TAMMS NE

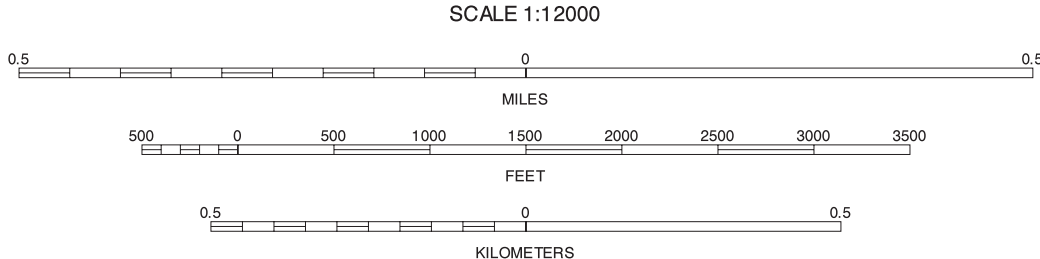
INDEX TO ADJOINING 3.75 MAPS

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

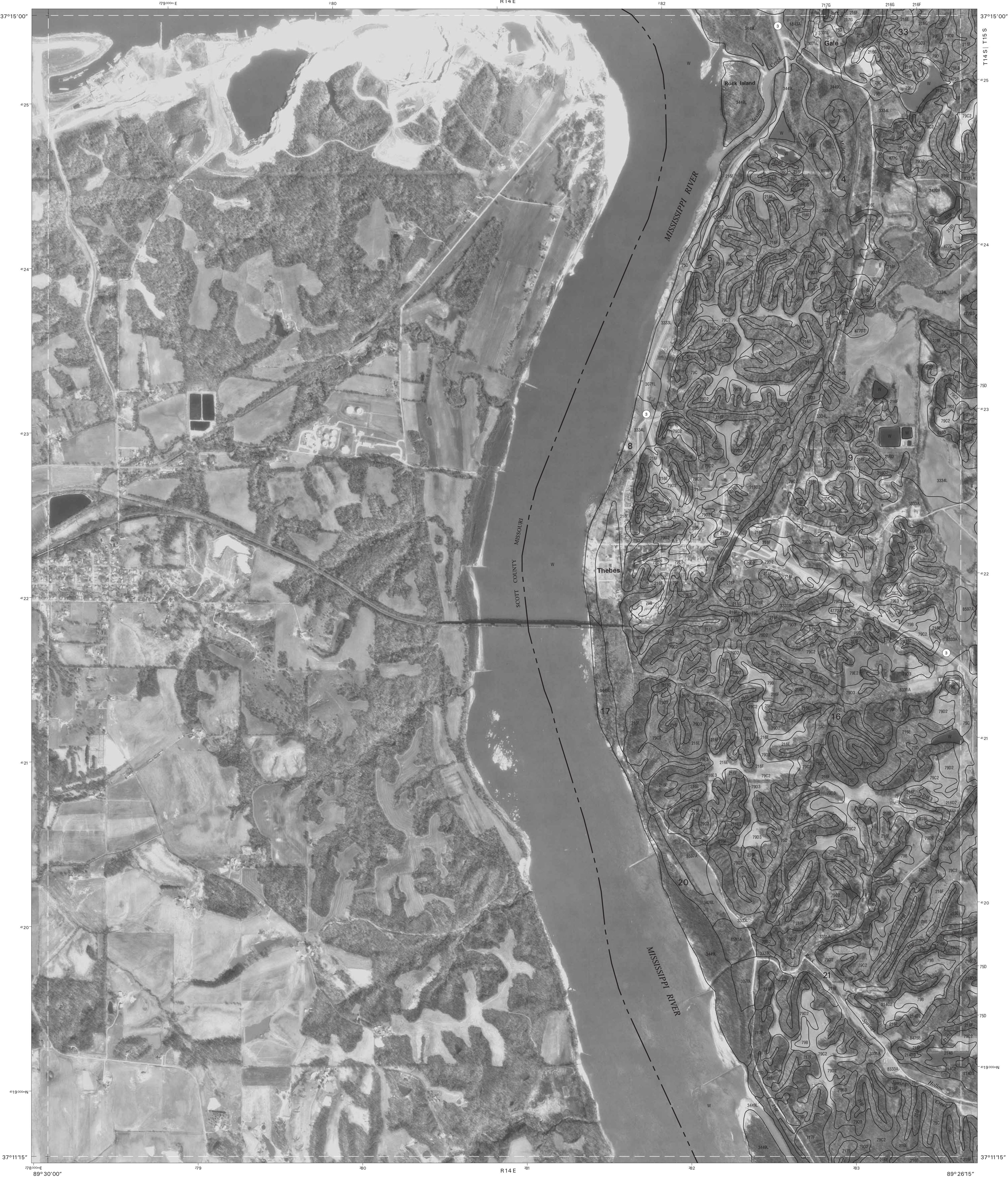


5	6	5 MILL CREEK NE 6 DONGOLA NW
11		11 MILL CREEK SE
16		16 TAMMS NE

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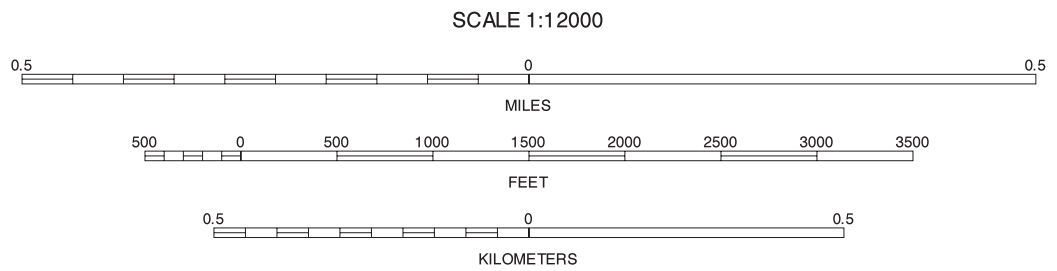
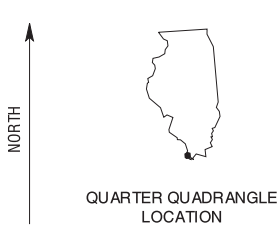
DONGOLA SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 12 OF 33

Soil map delineations extending beyond the dashed white quadrangle neartine are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

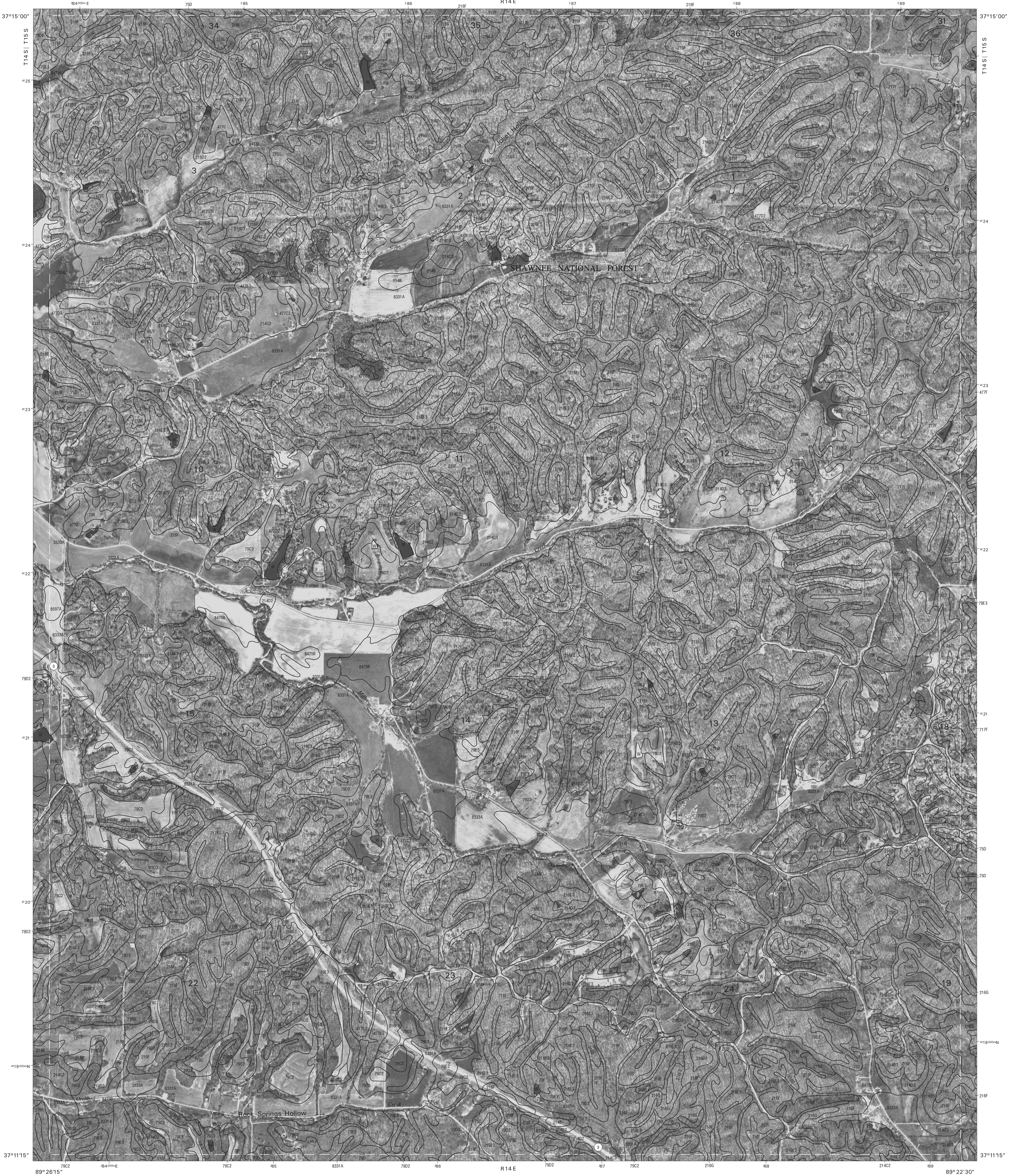


7	8	9	7 CAPE GIRARDEAU SE
			8 MCCLURE SW
		14	9 MCCLURE SE
			14 THEBES NE
	17	18	17 THEBES SW
			18 THEBES SE

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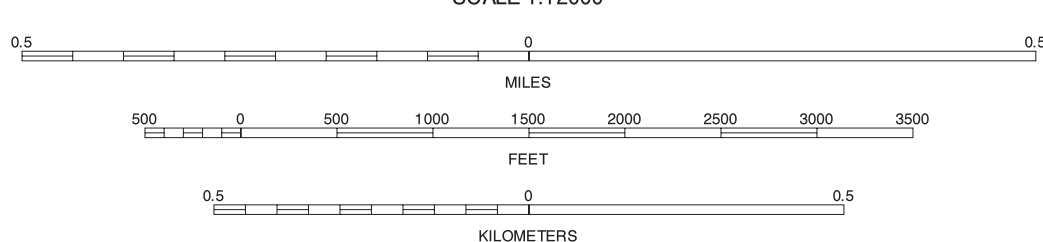
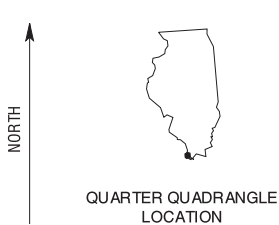
THEBES NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 13 OF 33

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

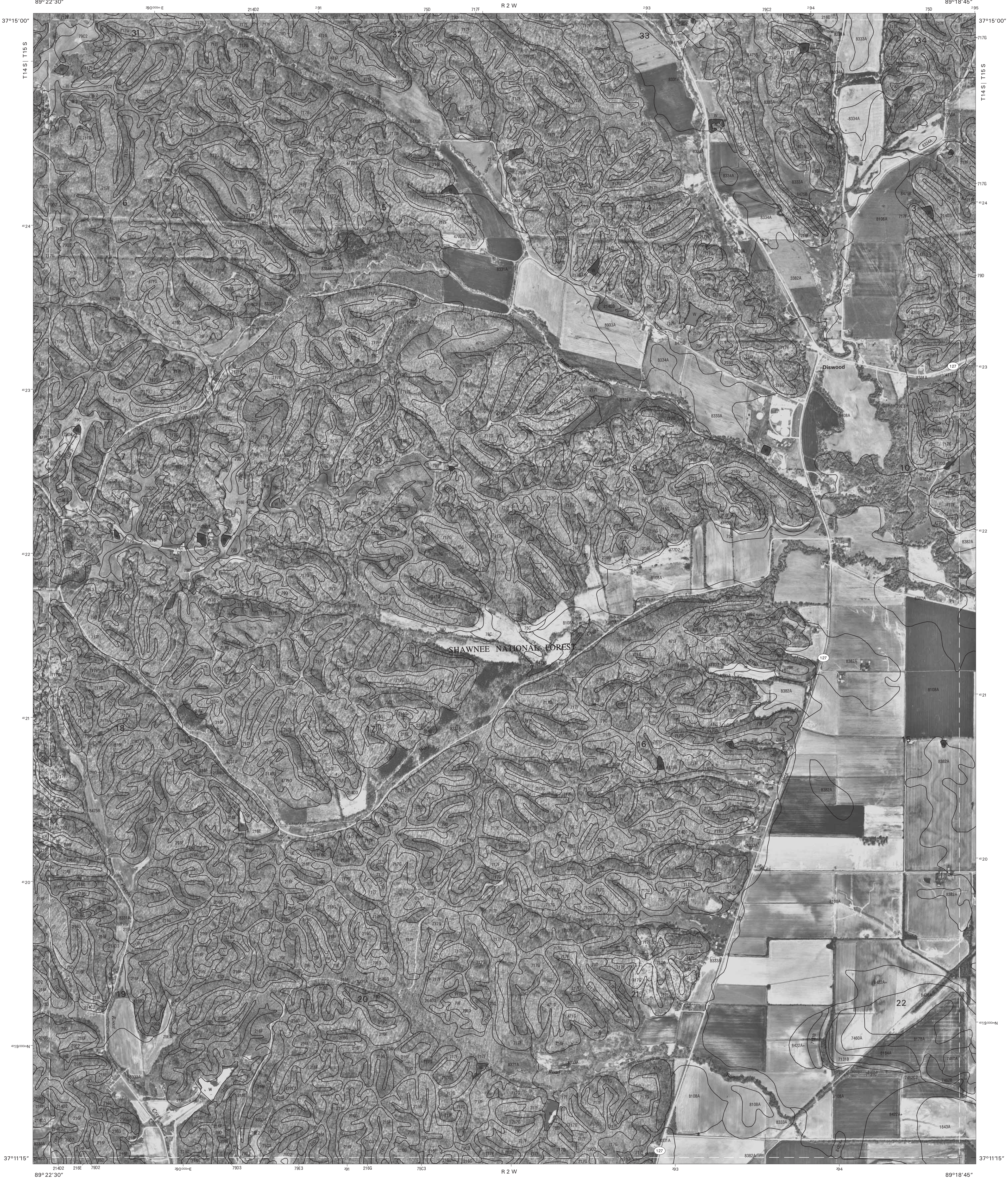


8	9	10	8 MCCLURE SW
13	15	17	9 MCCLURE SE
17	18	19	10 MILL CREEK SW
			13 THEBES NW
			15 TAMMS NW
			17 THEBES SW
			18 THEBES SE
			19 TAMMS SW

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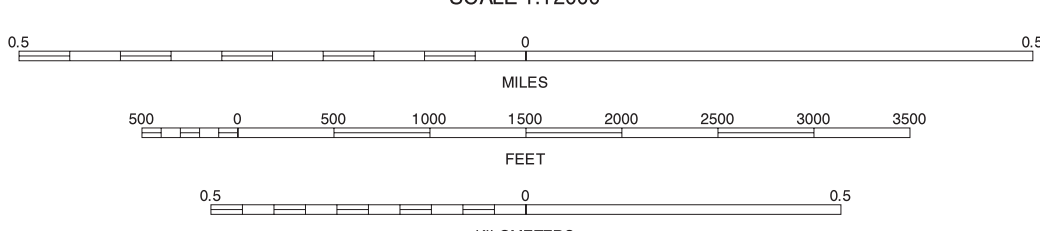
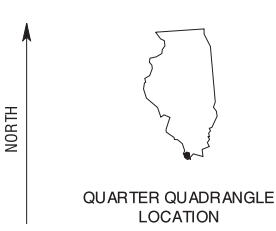
THEBES NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 14 OF 33

Soil map delineations extending beyond the dashed white quadrangle neeline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks; Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



9	10	11
14	15	16
18	19	20

9 MCCLURE SE
10 MILL CREEK SW
11 MILL CREEK SE
14 THEBES NE
15 THEBES SE
16 TAMMS NE
17 THEBES SE
18 TAMMS SW
19 TAMMS SW
20 TAMMS SE

TAMMS NW, ILLINOIS
375-MINUTE SERIES
SHEET NUMBER 15 OF 33

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.

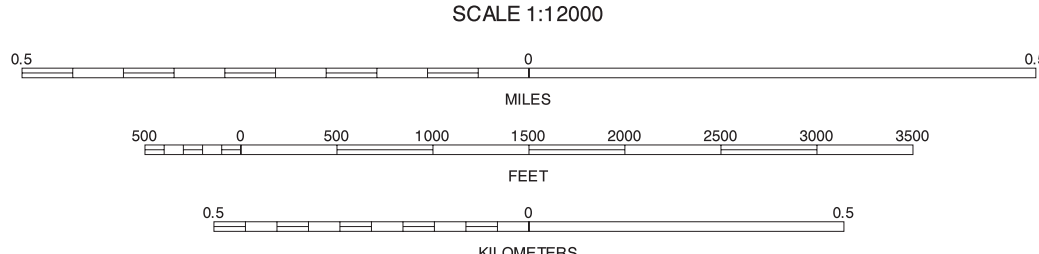


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION



10	11	12
15		
19	20	

10 MILL CREEK SW
11 MILL CREEK SE
12 DONGOLA SW
15 TAMMS NW
19 TAMMS SW
20 TAMMS SE

INDEX TO ADJOINING 3.75 MAPS

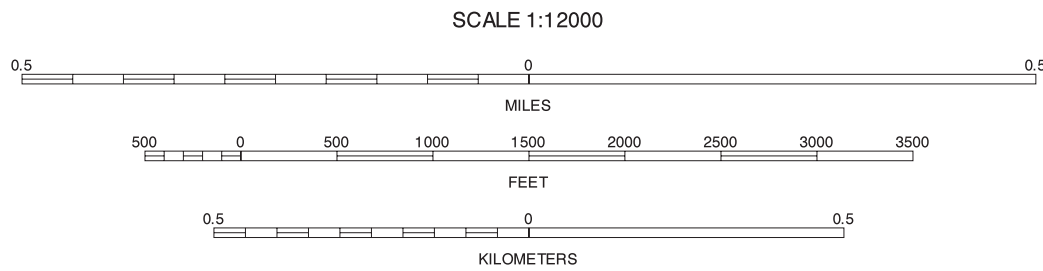
TAMMS NE, (OVERSIZED) ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 16 OF 33

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

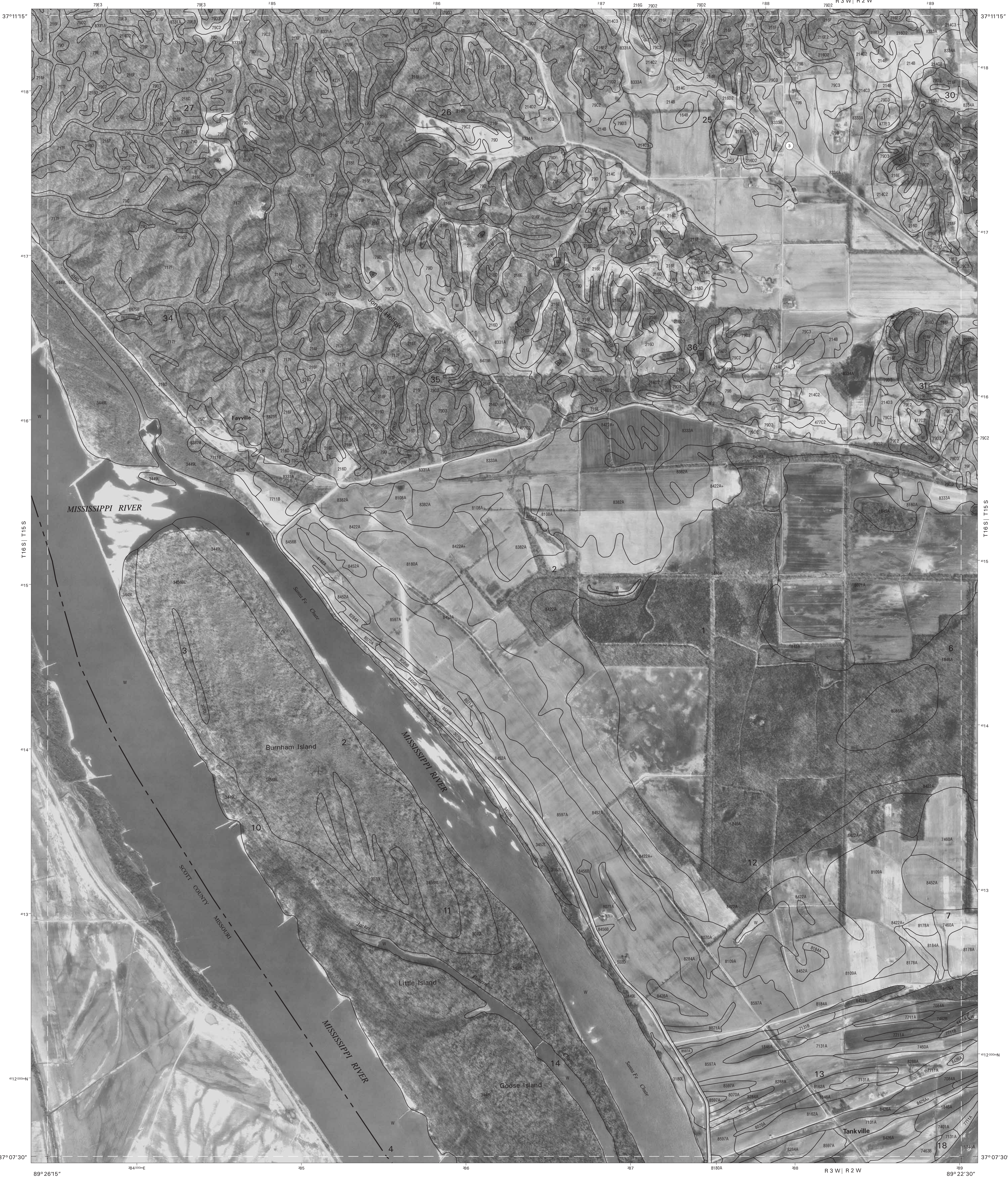


13	14	13 THEBES NW
		14 THEBES NE
	18	18 THEBES SE
	21	21 THEBES SWNE

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THEBES SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 17 OF 33

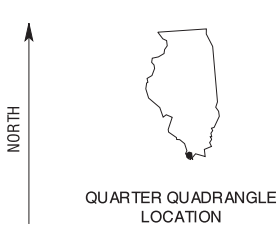
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.





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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks; Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

				15 TAMMS NV
--	--	--	--	-------------

TAMMS SE, ILLINOIS

89° 26' 15"

SHEET NUMBER 21 OF 33

R 3 W | R 2 W

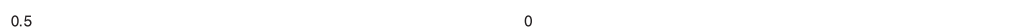


Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1998 - 1999 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks; Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Digital data are available for
this quadrangle.



QUARTER QUADRANG



17	18	19	17 THEBES SW
			18 THEBES SE
			19 TAMMS SW
		22	22 CACHE NW
			26 THEBES SW

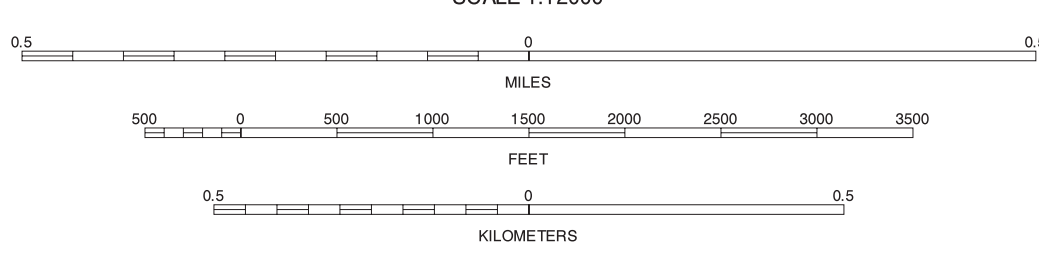
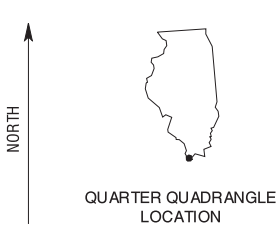
THEBES SW NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 21 OF 33

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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



18	19	20	18 TAMES SE 19 TAMES SW 20 TAMES SE 21 TAMES SW NE
21		23	23 CACHE NE 26 TAMES SW SE 27 CACHE SW 28 CACHE SE
26	27	28	

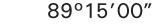
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CACHE NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

37° 03' 45"

37° 03' 45"



19	20	19 TAMMS SW 20 TAMMS SE
22	24	22 CACHE NW 24 CAIRO NW
27	28	27 CACHE SW 28 CACHE SE 29 CAIRO SW

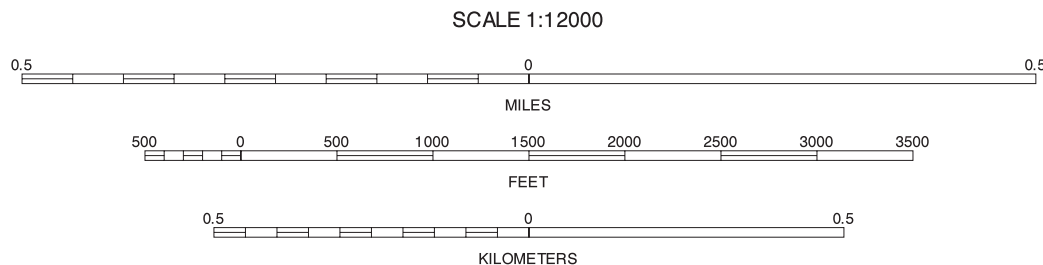
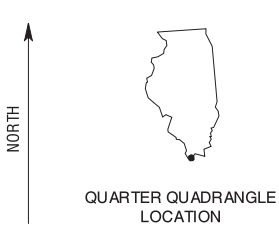
INDEX TO ADJOINING 3.75 MAPS

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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



20		20 TAMS SE
23	25	25 CACHE NE 26 CACHE NE 28 CACHE SE 29 CACHE SW 30 CACHE SE
28	29	30

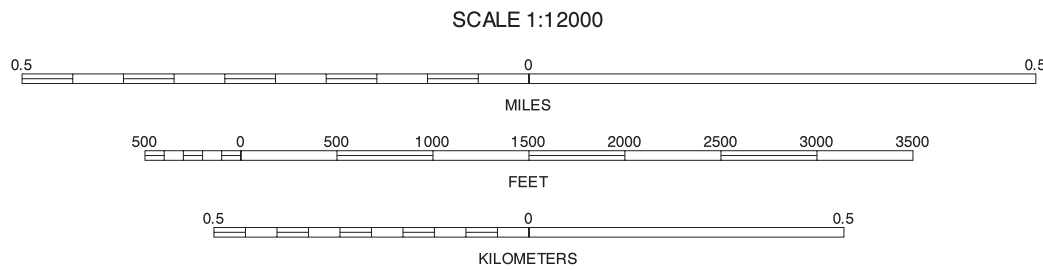
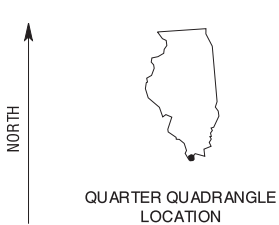
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CAIRO NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 24 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



24	29	30	35
24 CAIRO NW	29 CAIRO SW	30 CAIRO SE	35 CAIRO NE

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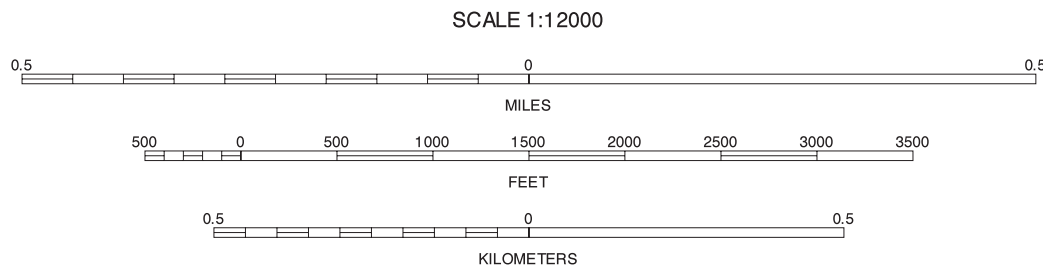
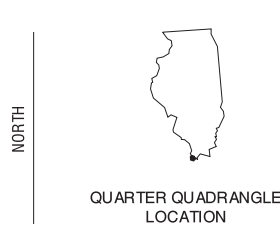
CAIRO NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



21	22
26	27
28	29

21 THEBES SW NE
22 CACHE NW
26 THEBES SW
27 CACHE SW

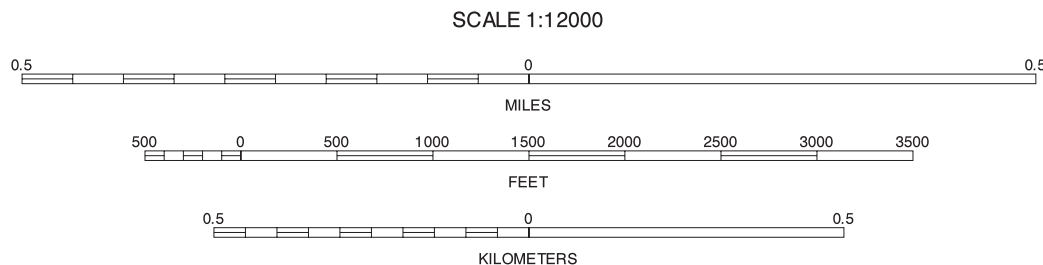
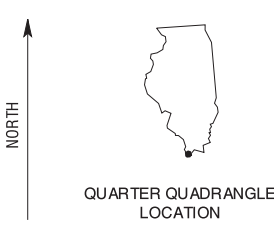
THEBES SW SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 26 OF 33

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



21	22	23
26		28
		31

21 THEBES SW NE
22 CACHE NW
23 CACHE NE
26 THEBES SW SE
28 CACHE SE
31 CHARLESTON NE

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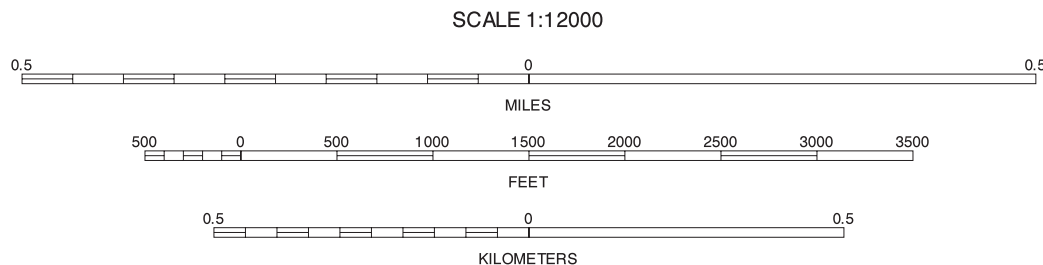
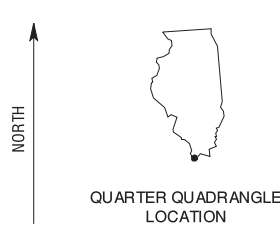
CACHE SW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 27 OF 33

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



22	23	24	22 CACHE NW 23 CACHE NE 24 CAIRO NW 27 CACHE SW 29 CAIRO SW
27		29	
	31	32	31 CHARLESTON NE 32 WYATT NW

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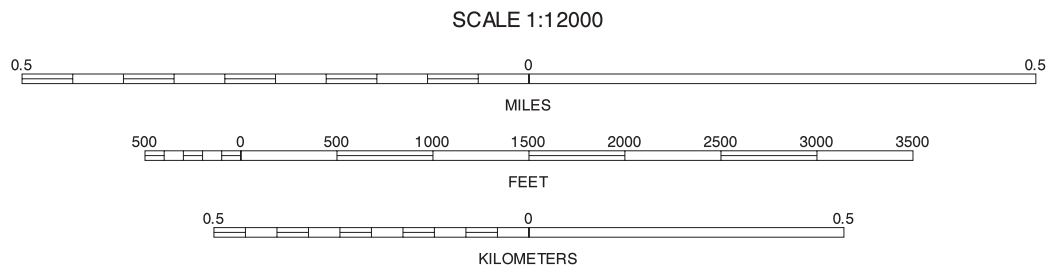
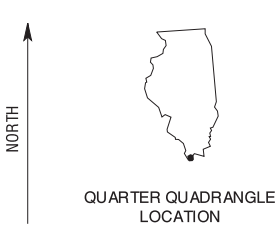
CACHE SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 28 OF 33

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



23	24	25	23 CACHE NE
			24 CAIRO NW
			25 CAIRO NE
			28 CACHE SE
28		30	30 CAIRO SE
			31 CHARLESTON NE
			32 WYATT NW
31	32	33	33 WYATT NE

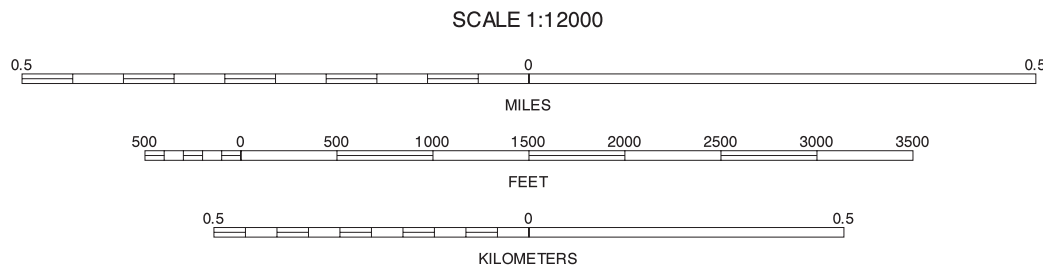
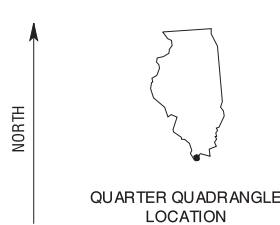
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CAIRO SW, ILLINOIS
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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



24	25	24 CAIRO NW 25 CAIRO NE
29		28 CAIRO SW 32 WYATT NW 33 WYATT NE
32	33	

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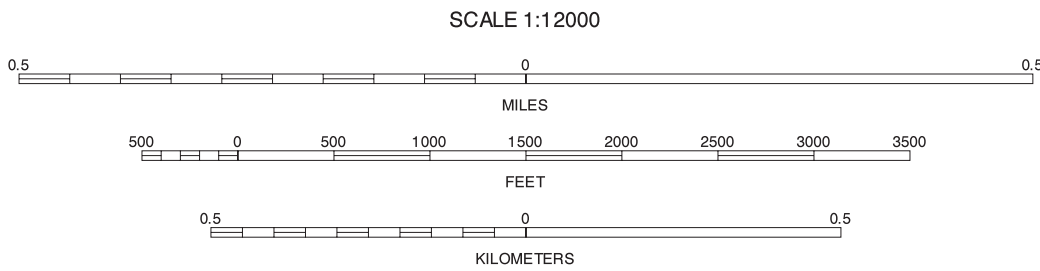
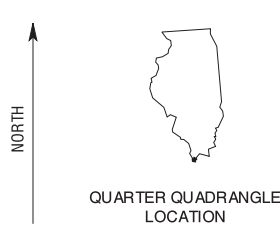
CAIRO SE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 30 OF 33

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



27	28	29	27 CACHE SW
			28 CACHE SE
			29 CAIRO SW
			32 WYATT NW

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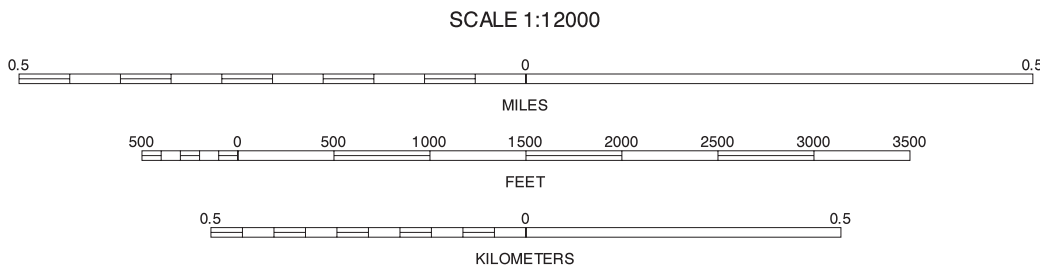
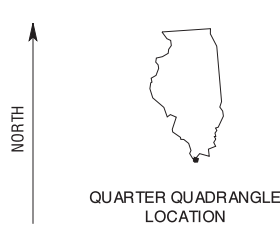
CHARLESTON NE, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 31 OF 33

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



28	29	30	28 CACHE SE 29 CAIRO SW 30 CAIRO SE 31 CHARLESTON NE 33 WYATT NE
31		33	

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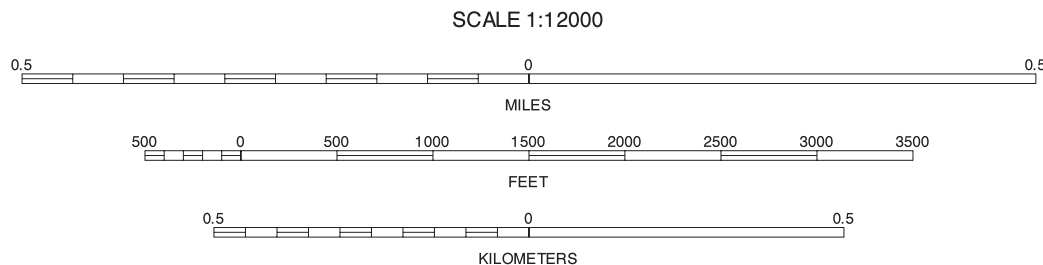
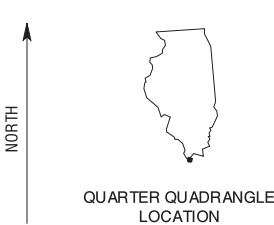
WYATT NW, ILLINOIS
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 33

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29	30	29 CAIRO SW
		30 CAIRO SE
32		32 WYATT NW

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